SAMSUNG
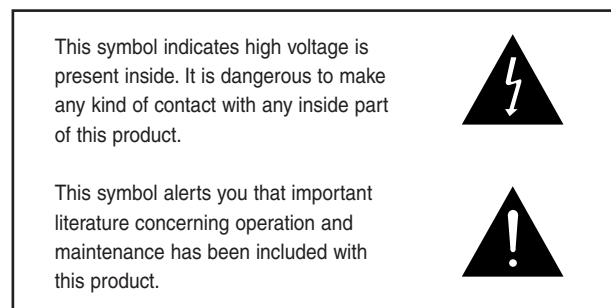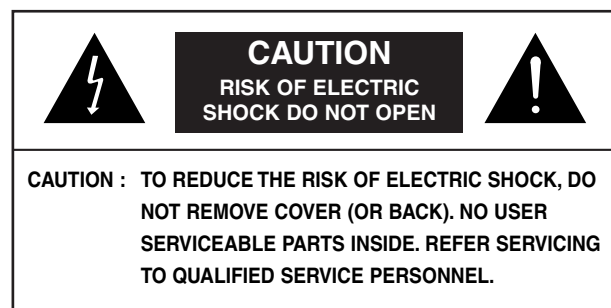
DIGITAL VIDEO RECORDER

SHR-3010
User's Manual

To use this product safely, have to read "**Important Safety Introductions**", and then be well aware of the contents.

Important Safety Instructions

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol indicates high voltage is present inside. It is dangerous to make any kind of contact with any inside part of this product.

This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions.
1) This device may not cause harmful interference, and
2) This device must accept any interference that may cause undesired operation.

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plus. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a used, caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
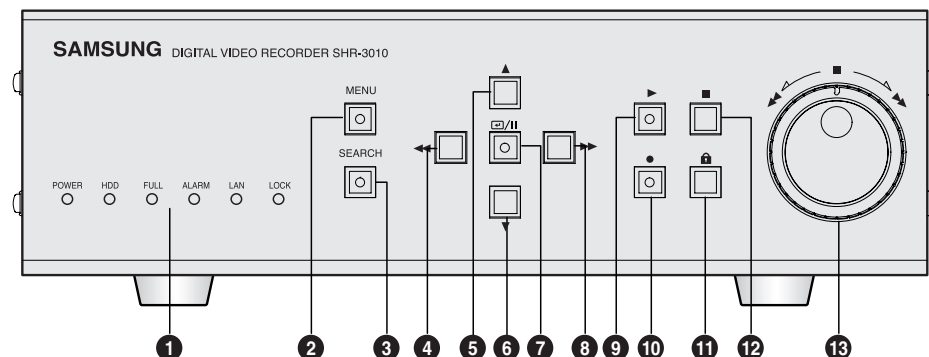
Contents

I. Summary

1 Introduction

The Digital Video Recorder SHR-3010 is a Digital Time Lapse Recorder to utilize its HDD as a recording media. How to use it is simple and therefore existing users of Time Lapse VCR can also access to it since it is built with Jog/Shuttle. You can also perform continuous recording on the HDD and directly view image recorded without turning videotapes as in the existing Time Lapse VCR. SHR-3010 can record both image and sound simultaneously, directly control the system from an external PC, and back up data with an external SCSI HDD.

2 Characteristics

- **Upon booting the system, it recognizes automatically whether the incoming signal is NTSC or PAL signal.**
- **Adjusting screen quality in 4-steps**
  - Very High, High, Normal, Low
- **Variously changing numbers of recording fields per second.**
  - NTSC: 60 ~ 0.50 Fields/sec
  - PAL: 50 ~ 0.50 Fields/sec
- **Simultaneous recording and regeneration**
- **Reservation recording by using timers**
- **Recording by alarm**
- **Motion detection function and alarm occurrence or recording available in motion detection**
- **Multiplexer link**
- **Various regeneration speed**
  - Frame Advance by Jog
  - 1/5, 1/2, 1, 2, 5, 10, 20 baud rate (forward, backward)
- **Convenient retrieval function**
  - Date & Time Search, Alarm Event Search, Record Event Search
- **Convenient operation by using Jog/Shttle**
- **Remote monitoring and control via LAN**
  - Network Interface: Ethernet (10/100BaseT)
  - Protocol: TCP/IP
  - Web Server: Image capture and remote monitoring through a Viewer Program installed at PC
- **Automatic booting of system in power failure recovery during recording mode, and starting of recording**
- **Remote control by series communication**
  - RS232 1 port
  - RS485 2 ports (connection of up to 32 sets)
  - Camera PAN/TILT/ZOOM Control of LAN VIEWER PROGRAM via Controlling RS-485
- **The recorded state and remnant hard disk space are displayed as bars on the screen and especially in the play mode, the part currently being played of the total hard disk capacity is displayed in the bar.**
- **You can record video and audio at the same time.**
- **Besides English, multi-language support provides German, French, Spanish, and Italian.**
- **You can back up data with SCSI.**
- **You can control the camera and select channels with the Remote Viewer Program.** (For SAMSUNG model only :SCC-641, 643 Camera, SCC-421 Series (4201, 4203, 4301, 4303) Camera, SDM-160 Multiplexer)

3 Name and Function of Each Part

Front View

SAMSUNG DIGITAL VIDEO RECORDER SHR-3010

MENU

SEARCH

POWER HDD FULL ALARM LAN LOCK

No	Name	Function
❶	STATUS DISPLAY LED	Displays system status. • POWER : Checks power On. • HDD : Checks normal access to HDD. • FULL : Check if the hard disk is full. • ALARM : Check Alarm turns operates. • LAN : Checks LAN normally operates. • LOCK : Checks Recording Lock function operates.
❷	MENU	Used when displaying menu for setting-up systems or entering from the sub menu to the top menu.
❸	SEARCH	Displays recorded data lists. You can play it if selecting each of them, pressing SET/STILL(⏎/❚❚) button and then pressing the PLAY(▶) button.
❹	LEFT (◀◀)	Used when desiring to rewind during play of recorded image or see still screen in reverse, or changing or editing the left settings in setting-up details of menu.
❺	UP (▲)	Used for rewinding during play of recorded image or see still screen in reverse or changing or editing the left settings in setting-up details of menu.

No	Name	Function
❻	DOWN (▼)	Used when moving cursor to the lower item of menu or reducing values in setting-up details of menu.
❼	SET/STILL (⏎/❚❚)	Used when temporarily stopping during play or desiring to see still screen. Plays a role as Enter in menu setup.
❽	RIGHT (▶▶)	Used when fast forwarding during play of recorded image or desiring to see still screens sequentially, or changing or editing the left settings in setting-up details of menu.
❾	PLAY (▶)	Plays recorded data.
❿	RECORD (●)	Records current live image.
⓫	REC LOCK(🔒)	Prevents other keys from being entered during record.
⓬	STOP (■)	Stops play or record.
⓭	JOG/SHUTTLE (⟳ / ◔)	Used when moving cursor in menu setup or changing values in setting-up details of menu. In addition, used when viewing frames one by one during temporary stop in data play mode or changing play speed.

Rear View

No	Name	Function
❶	**RS232 PORT**	Serial Port for remote control.
❷	**RS485 PORT**	Serial Port for remote control.
❸	**VIDEO IN/OUT**	Composite image signal I/O terminal (BNC Style Connector).
❹	**AUDIO IN/OUT**	Audio Signal Input/Output Jacks (RCA Jacks).
❺	**LAN**	LAN Cable Connection Terminal.
❻	**MODE**	It is the DIP switch to set System ID, Direct Communication, Termination, etc. • 1~5 : System ID. • 6 : Not Use. • 7 : Termination On/Off (Of all the directly connected systems, it sets the last system as On). • 8 : Not Use.
❼	**SCSI**	SCSI Connector for Data Backup

No	Name	Function
❽	**EXTERNAL I/O PORT**	• ALARM IN: In the N.C. (Normally Closed) mode, the system recognizes an alarm when a High (5V) signal is input for over 0.5 seconds. In the N.O. (Normally Open) mode, the system recognizes an alarm when a Low (0V) signal is input for over 0.5 seconds. (**Please refer to "② ALARM DETECT TYPE" on p. 3-18.**) • ALARM RESET: The alarm mode is cleared when a Low (0V) signal is input for over 0.5 seconds. • ALARM OUT: A High (5V) signal is output during alarm recording. • TRIGGER OUT: This signal is for switching the recording output screen of the Multiplexer. • REC IN: The system begins recording when a Low (0V) signal is input for over 0.5 seconds. • DISK END: If the DISK END MODE of the RECORD MODE SETUP is set to STOP, a Low (0V) signal is output for about 1 second when the HDD becomes full during recording. (**Please refer to "④ DISK END MODE" on p. 3-16.**)
❾	**FAN**	Fan
❿	**AC IN**	Connects power cable.
⓫	**POWER**	Power On/Off button.

4 Unpacking

When purchasing product, first remove packing and put it on a flat floor or at a place to use it.
Then, ensure all following contents are included:

◗ Main body
◗ User's Manual
◗ 1 power cord
◗ 2 Rack Mount Adapter
◗ SCREW-MACHINE (PH, UNC6-32, L4.2, WHT) x 4
◗ Remote Viewer Program Installation CD
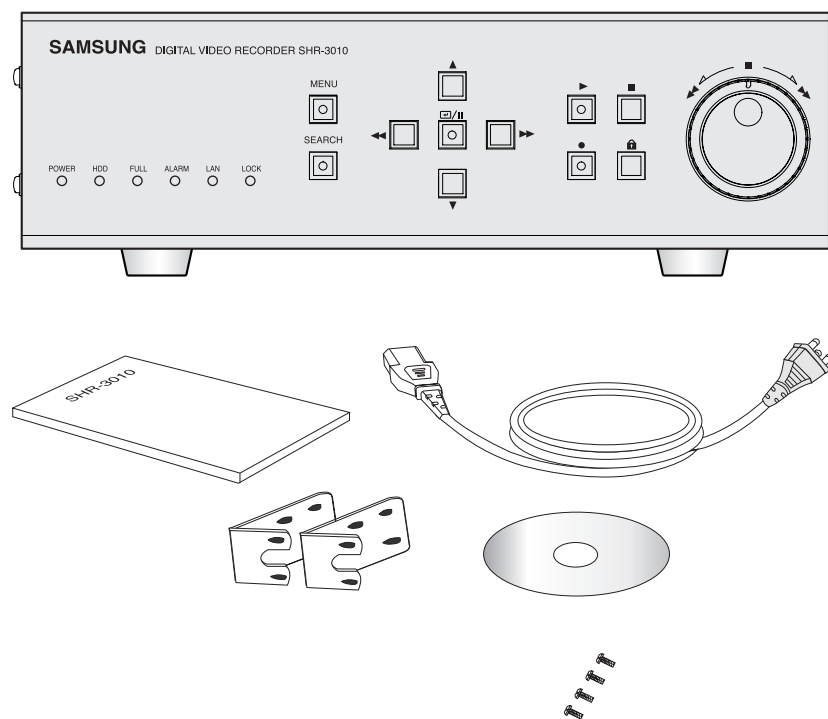
⚠ *Caution*

*The above contents can be changed without notice in order to improve the
performance or function of the product.*

5 HDD Addition

Mounting HDD

1. Unfasten the SCREW-SPECIAL (BWH, M4, L8, WHT) 11 EA attached to the left, right,
   and rear of the product, and then remove the CABINET-TOP from the product.
2. Unfasten the SCREW-TAPTITE (BH, M3, L6 WHT) 3 EA to remove the HDD from the
   BRACKET-HDD as shown in the picture.
3. Attach the HDD to the BRACKET-HDD as shown in the picture, and fasten the SCREW-
   MACHINE (PH, UNC6-32 L4, WHT) 4 EA supplied as ACCESSORY.
4. Place the HDD with the BRACKET-HDD inside the product, and fasten the SCREW-
   TAPTITE (BH, M3, L6 WHT) 3 EA.
5. Connect the Power Supply Cable and the AT-Bus Interface Cable. (Refer to "Cable
   Connection" on page 1-10.)
6. Put the CABINET-TOP back on, and fasten the SCREW-SPECIAL (BWH, M4, L8,
   WHT).
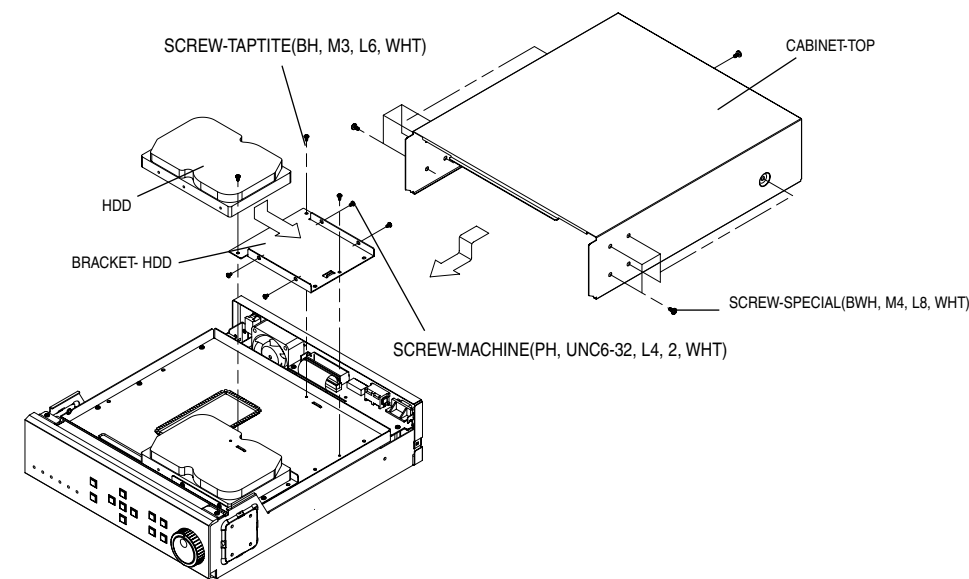
⚠ *Caution*

*Basically, a product with two HDDs has two HDDs attached to the HDD brackets
as it is introduced to the market. And a product with a single HDD is supplied
with an extra HDD bracket aside from the HDD bracket for attaching the HDD.*

⚠ Caution

Please be sure to turn the system off before you replace or add the HDD. If not, the HDD may poorly operate or the life may be reduced.

Mode setup and cable connection

Set a HDD mode and connect cables after mounting the HDD to product.
Below is shown drawing of Power Connector and AT-Bus Interface Connector and Configuration Jumper Block of HDD.
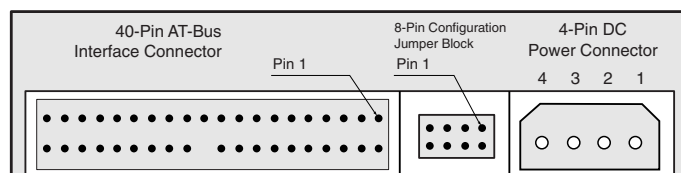
Setting of HDD mode is performed in a Configuration Jumper Block.
When mounting two hard disk drives on the product, one should be set in the Master Mode and the other in the Slave Mode. Basically, since the hard disk drive mounted on the product is in the Master Mode, when mounting a new hard disk drive it can be set in the Slave Mode. For example, mode is set as follows in case of Samsung Spinpoint V40 HDD:

Master Mode

Slave Mode
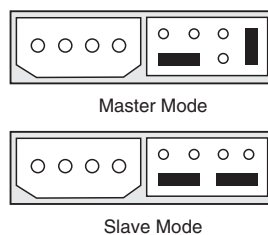
AT-Bus Interface Cable and Power Supply Cable are connected to AT-Bus Interface Connector are connected by referring to following drawing to ensure the HDD mounted on product can properly operate.
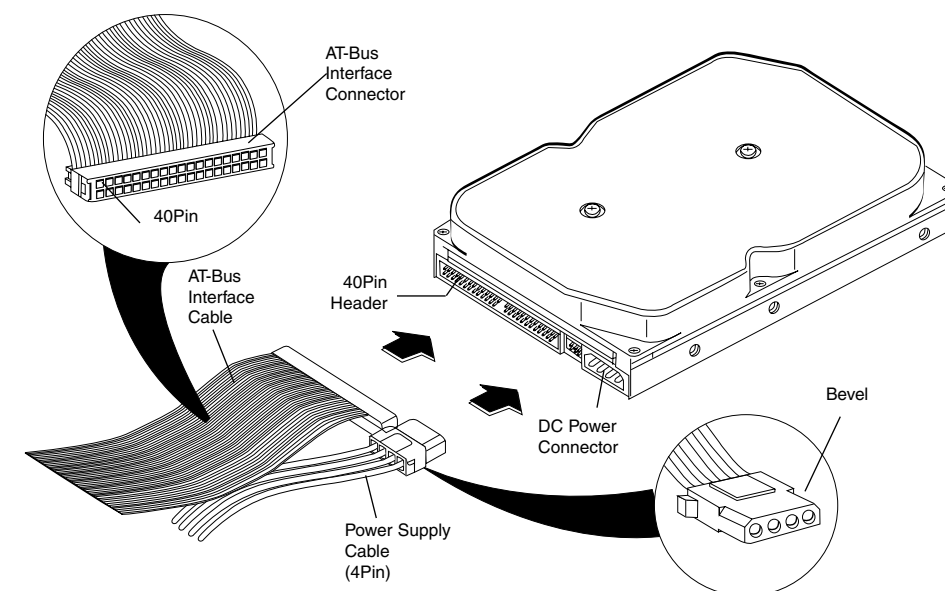
If successfully mounting the HDD on the product and then booting the system, the system recognizes that a new HDD is mounted and starts to operate after formatting the first HDD.

⚠ Caution

We recommend Samsung Electronics' Spinpoint V40 SV4002H or SV8004H as a HDD for this product. When installing an additional HDD, please be sure to inquire at the store where you purchased this product.

II. Connection with Other Devices

1 Connection to External Devices

CAMERA   RX   SIREN   LIGHT   MICROPHONE

RS232   RS-485   MODE   POWER   ON   OFF   AC IN

VIDEO   AUDIO   IN   OUT   LAN   SCSI

VIDEO OUT
(NTSC/PAL MONITOR)   AUDIO OUT   LAN   SHR-3010 VIDEO RECORDER

■ This unit can be connected to external devices such as a camera for video signal input, a microphone for audio signal input, and an NTSC or PAL monitor for video and audio signal output.

■ It can be connected to external devices such as an alarm according to the user's request.

■ It can be connected to a PC through a LAN or Serial connection for remote control.

■ Your may back up data with a backup device using SCSI for the purpose of data backup.

⚠ **Caution**

– A CRT monitor capable of displaying an NTSC or PAL video signal must be used with this unit. An ordinary computer monitor cannot be used.
– The backup device of this equipment is applicable only to SCSI HDDs.

2 Connection with Multiplexer
(e.g. connection to SDM-160)

CAMERA
1
2
3
⋮
16

TRIGGER OUT
ALARM IN
GND

MONITOR OUT

SHR-3010 VIDEO RECORDER

SDM-160 DIGITAL MULTIPLEXER

VIDEO IN
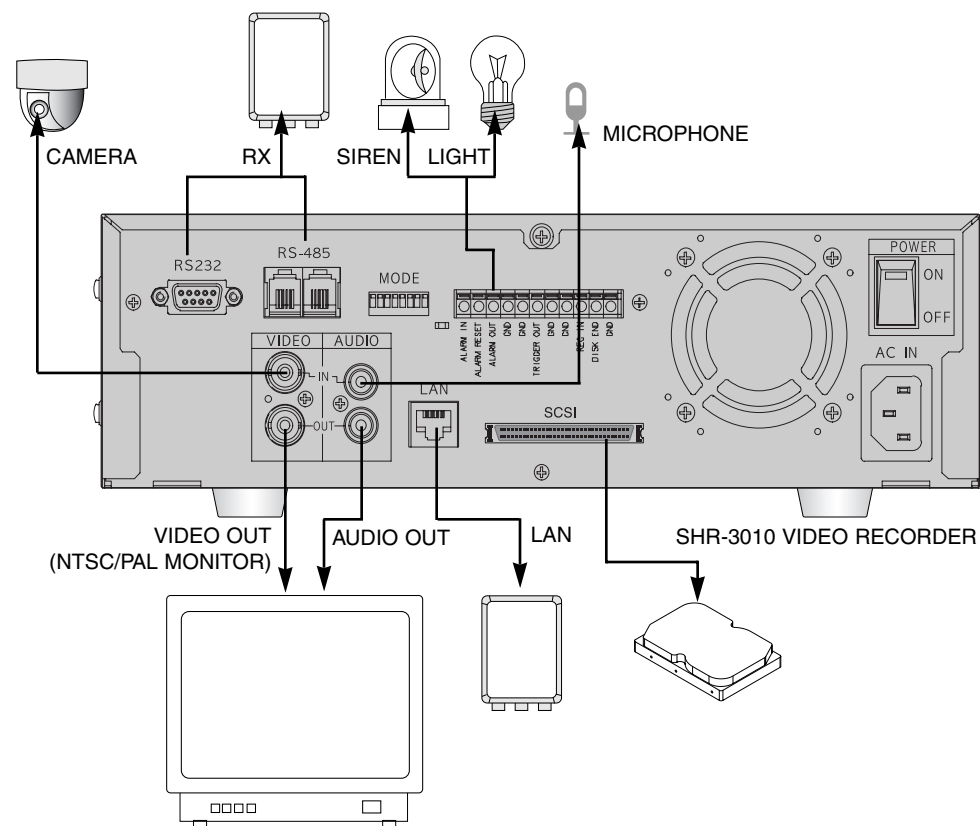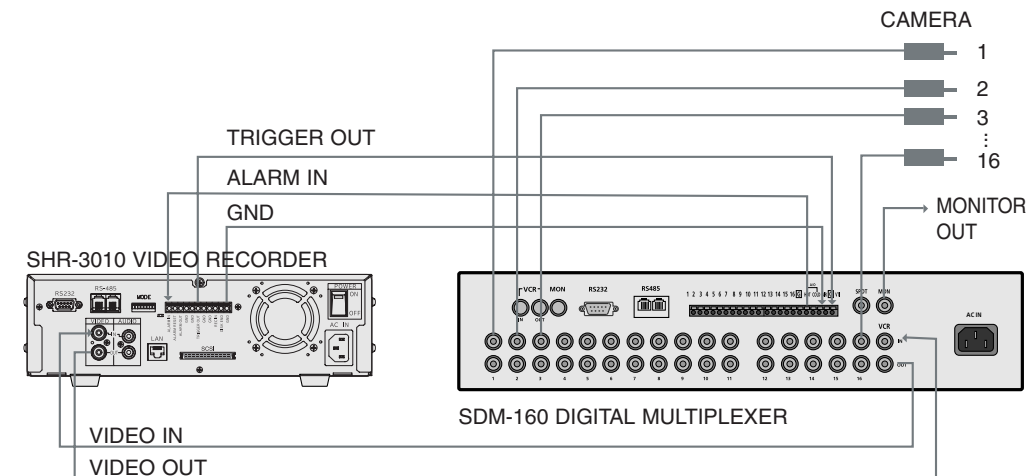VIDEO OUT

■ SDM-160 is a Multiplexer for NTSC, and SDM-160P is a Multiplexer for PAL.

■ For details on the functions of SDM-160, please refer to the user's guide of SDM-160.

■ Connect this unit's video signal input jack to the video signal output jack of SDM-160 and connect this unit's video signal output jack to the video signal input jack of SDM-160.

■ Connect the alarm output jack (ALARM OUT) of SDM-160 to this unit's alarm input jack (ALARM IN), and connect the VTI jack of SDM-160 to this unit's trigger output jack (TRIGGER OUT).

■ Connect both GND terminals together.

■ You do not have to connect the alarm out (ALARM OUT) and alarm reset (ALARM RESET) terminals of this unit.

⚠ **Caution**

- Be sure to connect the trigger output terminal (TRIGGER OUT) of this unit to the Multiplexer. Otherwise, a normal recording cannot be made.
(For the connection method, please refer to the user's guide for the Multiplexer you want to use.)

- If the system's recording field rate is set to 0.50 ~ 15 FPS (Fields Per Second) for the input NTSC video signal and to 0.50 ~ 12.5 FPS for the input PAL video signal, be sure to set the Multiplexer in such a way that the recording output screen is switched by the Trigger Pulse. (For settings related to the recording field rate, please refer to "❸ PICTURE RATE" on p. 3-15.)

- If the system's recording filed rate is set to 30 FPS for the input NTSC video signal and to 25 FPS for the input PAL video signal, a half of the input video channels may not be recorded depending on the type of Multiplexer. In this case, set the recording field rate to 60 FPS for NTSC and to 50 FPS for PAL.

3 System Connection for Alarm Recording

<Rear Side Connection Terminal of SHR-3010>   <Outside Product>

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪   ① ② ③ ④ ⑤
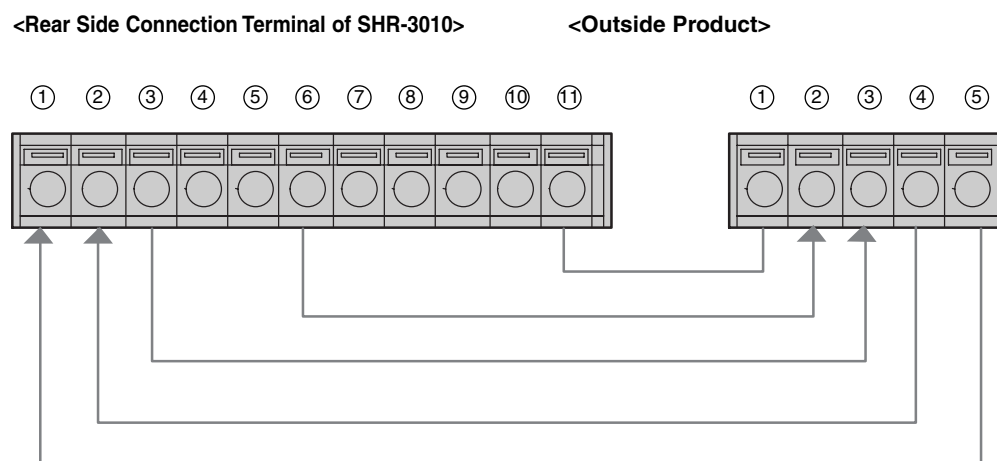
① ALARM IN   ① GND
② ALARM RESET   ② TRIGGER IN
③ ALARM OUT   ③ ALARM IN
⑥ TRIGGER OUT   ④ ALARM CANCEL
① GND   ⑤ ALARM OUT

■ Alarm recording is a function for recording the input video when an alarm signal is input while a device with alarm output is connected to this unit.

■ Connect to the corresponding terminals, as the numbers may be different for external devices.

■ For external devices, if the alarm input (ALARM INPUT) and alarm cancel (ALARM CANCEL) are not available, you can leave them unconnected.

4 Connection with PC for Use

Connection with RS-232C

A. Communication Method
● Data Code: ASCII Code
● Protocol: 8 bit Data, 1 Stop bit, None Parity
● Transmission speed: 4800, 9600, 19200, 38400 bps

B. RS-232C terminal (D-SUB 9 Pin) and Pin specifications
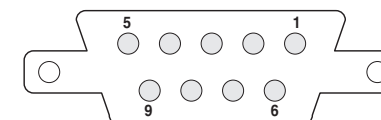
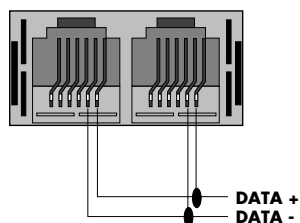| Pin No	Pin Specifications
2	TXD (Transmitted Data)
3	RXD (Received Data)
5	SG (Signal Ground)
1, 4, 6~9	NO Connection

Connection with RS-485

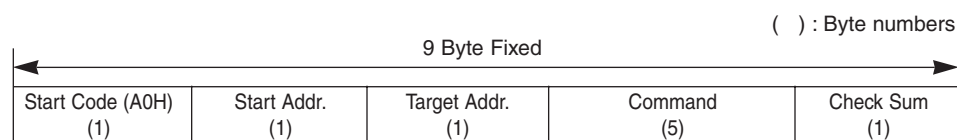Remote control is allowed through connection with RS-485 (up to 1.2km).

A. Communication method

- Data transmission method: Start-Stop Synchronized Serial Interface
- Protocol: 8 bit Data, 1 Stop bit, None Parity
- Transmission speed: 4800, 9600, 19200, 38400 bpss

B. RS-485 terminal and Pin specifications

DATA +
DATA -

C. Data Format (Samsung Protocol)

( ) : Byte numbers

9 Byte Fixed

Start Code (A0H) (1)	Start Addr. (1)	Target Addr. (1)	Command (5)	Check Sum (1)

Data Byte	Type	Contents	Remarks
Byte 1	Start Code	0xA0	Start of Data Packet
Byte 2	Sender Addr.	Transmission Address	Source Range (0x00 ~ 0xFF)
Byte 3	Target Addr.	Reception Address	Destination Range (0x00 ~ 0xFF)
Byte 4	Command	Only Image Recorder Command	0x0A
Byte 5		Key Function	Range (0x01 ~ 0xFF)
Byte 6		0xFF	0xFF
Byte 7		0xFF	0xFF
Byte 8		0xFF	0xFF
Byte 9	Check Sum	Lower byte of (0xFFFF - (values adding Byte 2 ~ Byte 8))	

D. Code value by key

Function	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6, 7, 8	Byte 9	Response (Byte 5)
[SET COMMAND]								
MENU	0xA0	Src.Addr	Dest.Addr.	0x0A	0x01	0xFF	Check Sum	0x01
SEARCH	0xA0	Src.Addr	Dest.Addr.	0x0A	0x02	0xFF	Check Sum	0x02
SET/STILL	0xA0	Src.Addr	Dest.Addr.	0x0A	0x03	0xFF	Check Sum	0x03
UP	0xA0	Src.Addr	Dest.Addr.	0x0A	0x04	0xFF	Check Sum	0x04
DOWN	0xA0	Src.Addr	Dest.Addr.	0x0A	0x05	0xFF	Check Sum	0x05
LEFT	0xA0	Src.Addr	Dest.Addr.	0x0A	0x06	0xFF	Check Sum	0x06
RIGHT	0xA0	Src.Addr	Dest.Addr.	0x0A	0x07	0xFF	Check Sum	0x07
PLAY	0xA0	Src.Addr	Dest.Addr.	0x0A	0x08	0xFF	Check Sum	0x08
STOP	0xA0	Src.Addr	Dest.Addr.	0x0A	0x09	0xFF	Check Sum	0x09
RECORD	0xA0	Src.Addr	Dest.Addr.	0x0A	0x0A	0xFF	Check Sum	0x0A
REC LOCK	0xA0	Src.Addr	Dest.Addr.	0x0A	0x0B	0xFF	Check Sum	0x0B
F.Shuttle 1	0xA0	Src.Addr	Dest.Addr.	0x0A	0x0C	0xFF	Check Sum	0x0C
F.Shuttle 2	0xA0	Src.Addr	Dest.Addr.	0x0A	0x0D	0xFF	Check Sum	0x0D
F.Shuttle 3	0xA0	Src.Addr	Dest.Addr.	0x0A	0x0E	0xFF	Check Sum	0x0E
F.Shuttle 4	0xA0	Src.Addr	Dest.Addr.	0x0A	0x0F	0xFF	Check Sum	0x0F
F.Shuttle 5	0xA0	Src.Addr	Dest.Addr.	0x0A	0x10	0xFF	Check Sum	0x10
F.Shuttle 6	0xA0	Src.Addr	Dest.Addr.	0x0A	0x11	0xFF	Check Sum	0x11
F.Shuttle 7	0xA0	Src.Addr	Dest.Addr.	0x0A	0x12	0xFF	Check Sum	0x12
F.Shuttle 8	0xA0	Src.Addr	Dest.Addr.	0x0A	0x13	0xFF	Check Sum	0x13
R.Shuttle 1	0xA0	Src.Addr	Dest.Addr.	0x0A	0x14	0xFF	Check Sum	0x14
R.Shuttle 2	0xA0	Src.Addr	Dest.Addr.	0x0A	0x15	0xFF	Check Sum	0x15
R.Shuttle 3	0xA0	Src.Addr	Dest.Addr.	0x0A	0x16	0xFF	Check Sum	0x16
R.Shuttle 4	0xA0	Src.Addr	Dest.Addr.	0x0A	0x17	0xFF	Check Sum	0x17
R.Shuttle 5	0xA0	Src.Addr	Dest.Addr.	0x0A	0x18	0xFF	Check Sum	0x18
R.Shuttle 6	0xA0	Src.Addr	Dest.Addr.	0x0A	0x19	0xFF	Check Sum	0x19
R.Shuttle 7	0xA0	Src.Addr	Dest.Addr.	0x0A	0x1A	0xFF	Check Sum	0x1A
R.Shuttle 8	0xA0	Src.Addr	Dest.Addr.	0x0A	0x1B	0xFF	Check Sum	0x1B
R.JOG	0xA0	Src.Addr	Dest.Addr.	0x0A	0x1C	0xFF	Check Sum	0x1C
F.JOG	0xA0	Src.Addr	Dest.Addr.	0x0A	0x1D	0xFF	Check Sum	0x1D

E. Others

- Above data format and transmission speed may be changed depending on future development conditions.
- PC operates as Master, and Target Set as Slave in transmission/reception of data.
- No status other than Set Key Function should be received. Provided, however, that con tents recorded in a set should be always received for alarm function (Some delay can be happen due to communication speed).
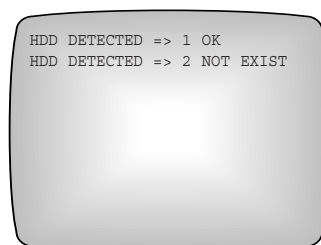
III. Basic Method to use
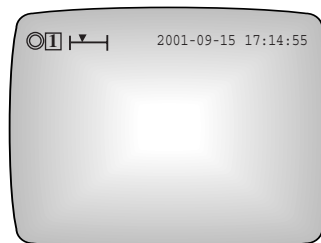
1 Booting the System

Power On

There is a power switch on the upper right hand side behind the system. Pull the power switch up to boot the system. Then, the LED on front of the system is turned on, a blue screen with the following message will appear and the system is booted.

```
HDD DETECTED => 1 OK
HDD DETECTED => 2 NOT EXIST
```

When you turn the system on, a blue screen appears and starts searching HDD. The message in the screen tells any HDD exists in the main body. The main body can contain 2 HDDs, one is installed properly but the other is not yet installed.
If the second HDD is installed, the message, 'HDD DETECTED =>2 OK' will be displayed.

When booting is finished, the following Live screen will appear.

```
◎①├──┤      2001-09-15 17:14:55
```

Recognizing incoming video signal

SHR-3010 system can automatically recognize whether the video signal connected at the input port is NTSC or PAL signal upon booting the system.
When you turn the system on, it will recognize if the image signal is NTSC or PAL automatically to set itself to the signal.
If the system power is turned on without connecting video signals to the input port, the system remembers the last signal and the system is configured accordingly. For example, if the past video signal connected to the input port was an NTSC signal, the system is configured to fit NTSC signals and for PAL, the same process is applied to fit PAL signals. However, if suddenly a type of video signal that is different from the video signal currently connected to the input port is connected, the screen will malfunction. In short, this is a case where PAL signal is connected to a system configured to satisfy NTSC signals or the other way around. In these cases, system power should be turned off, the new signal connected and then the system turned back on in order to be configured to recognize the new signal.
If you power on the system without attaching the hard disk drive, you will get an error message indicating that no hard disk drive was found.

```
HDD DETECTED => 1 NOT EXIST
HDD DETECTED => 2 NOT EXIST
```
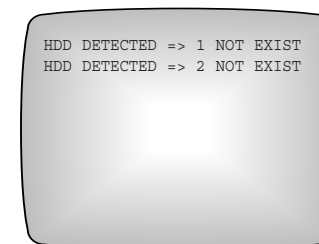
And the system will automatically keep on searching for a hard disk drive as shown below.
If you attach a hard disk drive at this time, the system will recognize the hard disk drive, the
boot process will end, and a live screen will appear.

```
SYSTEM UNSTABLE OR HDD NOT EXIST
RESET HDD DEVICE(S)
>TRY TO FIND HDD
>HDD NOT FOUND
```
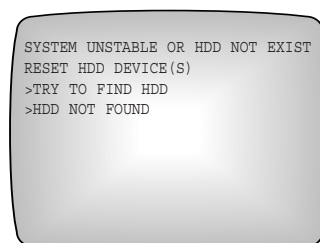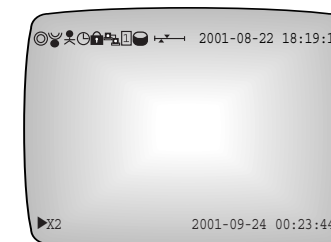
Power Off

Push the power switch down in order to turn off the system.
When the system power is turned off during recording, recording will be resumed next time
the system power is turned on and booting is complete.

⚠ Caution

Wait at least 3 seconds after turning off the system power before turning it back on.
Otherwise, the system may malfunction.

2 Basic Screen Viewing

Viewing Full Screen

Here comes the description of all the icons and status in the screen.

◉♥☂☉🔒🗗🗓🖥 ┝▼┥ 2001-08-22 18:19:12

▶X2   2001-09-24 00:23:44

◎	If system is in the recording state ◎ icon will blink. However, it does not blink in the Live Screen state.	
☂	If the system is in the recording state due to alarm, ☂ icon appears. In this state, ☂ icon continually blinks.	
☂	If the system is in the recording state due to Motion Detection, ☂ icon appears. In this state, ☂ icon continually blinks.	
☉	If the system is in the recording state due to the timer, ☉ icon appears.	
🔒	If the system in the recording lock state, 🔒 icon appears.	
🗗	It occurs when the system is connected to remote viewer program through the LAN.	
1	If the system is in a state of recording, 1 icon will blink. However, it does not blink in the Live Screen state. It shows in which hard disk drive the video data is stored. If there is only one hard disk drive installed in the system, there is always one icon. But if there are two hard disk drives installed, data is stored in the second hard disk after the first hard disk is full and then, the icon changes as in 2.	
🖮	The SCSI HDD was detected through the SCSI connector behind the main body.	
┝▼┥	The upper pointer shows the relative location of the recorded data being stored inside the hard disk and the lower pointer shows the relative location of the data currently being played back. The following pointer will be hidden in the general live screen and recording screen.	

You can change the above system status display position. The user will mark the position in the
top left and right corner. (Select LEFT or RIGHT in **STATUS POSITION** of the
CLOCK/DISPLAY MODE SET UP menu. Please refer to Page 3-14 for the details)

2001-08-22 18:19:12	It shows the current date and time as configured by the system. You can change the display position of date and time. You shall designate the position in the top right or left corner by yourself. (Just choose LEFT or RIGHT in the CLOCK/DISPLAY MODE SETUP menu. Please refer to Page 3-14 for the details)
▶ X2	If the system is in the playback mode, ▶ icon appears. And if the system is in the pause state, it changes to this icon ❚❚. In addition, stored data can be played back at various speeds; when played in the forward direction at speeds other than the normal speed, the speed is shown on the right side of the ▶ icon and if it is played in the reverse direction at speeds other than the normal speed, icon appears and the right side of this ▶ icon shows the speed. Possible speeds in the system for forward and reverse directions are 1/5, 1/2, 1, 2, 5, 10, 20 times normal speed.
2001-09-24 00:23:44	It shows the recorded date and time of the data currently being played back. You can change the recording date and time display position. The user will mark the position in the bottom left and right corner. (Select LEFT or RIGHT in TIME MARK POSITION of the RECORD MODE SET UP menu. Please refer to Page 3-15 for the details.)

Live Screen Viewing

The normal Live screen looks like this.

◎	If system is in the recording state ◎ icon will blink. However, it does not blink in the Live Screen state.
1	If the system is in a state of recording, 1 icon will blink. However, it does not blink in the Live Screen state. It shows in which hard disk drive the video data is stored. If there is only one hard disk drive installed in the system, there is always one icon. But if there are two hard disk drives installed, data is stored in the second hard disk after the first hard disk is full and then, the icon changes as in 2.
⊢•⊣	It shows the relative location of the recorded data inside the hard disk.
2001-09-15 07:14:55	It shows the current date and time as configured by the system.

Viewing Screen during recording

The normal recording screen looks like this.

◎☿⚡⊕🔒🖧⊢⊤⊣ 2001-08-22 18:19:12
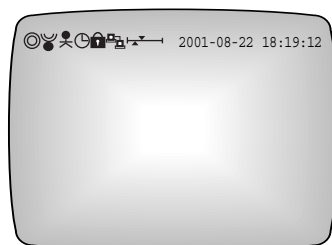
◎	If the system is executing the recording function, ◎ icon blinks.
☿	If the system is in the recording state due to alarm, ☿ icon appears. In this state, ☿ icon continually blinks.
⚡	If the system is in the recording state due to Motion Detection, ⚡ icon appears. In this state, ⚡ icon continually blinks.
⊕	If the system is in the recording state due to the timer, ⊕ icon appears.
🔒	If the system in the recording lock state, 🔒 icon appears.
🖧	It occurs when the system is connected to remote viewer program through the LAN.

Playback screen Viewing

The normal Playback screen looks like this.

◎①🖧⊢⊤⊣
► 2001-09-24 00:23:44

⊢▼⊣	The upper pointer shows the relative location of the recorded data being stored inside the hard disk and the lower pointer shows the relative location of the data currently being played back.
►	If the system is in the playback mode, ► icon appears. And if the system is in the pause state, it changes to this icon ‖. In addition, stored data can be played back at various speeds; when played in the forward direction at speeds other than the normal speed, the speed is shown on the right side of the ► icon and if it is played in the reverse direction at speeds other than the normal speed, icon appears and the right side of this ► icon shows the speed. Possible speeds in the system for forward and reverse directions are 1/5, 1/2, 1, 2, 5, 10, 20 times normal speed.
2001-09-24 00:23:44	It shows the recorded date and time of the data currently being played back.

3 Menu View

Menu Enter

Press a MENU button. Then, following screen appears.

```
MAIN MENU
CLOCK/DISPLAY MODE SETUP
RECORD MODE SETUP
ALARM RECORD SETUP
TIMER RECORD SETUP
SYSTEM SETUP
COMMUNICATION SETUP
SYSTEM INFORMATION
BACKUP SETUP
```
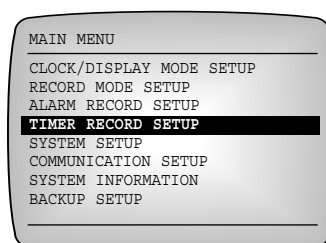
Note

You can go into the menu only when the system is in the Live screen mode. If the system is in the recording mode or playback mode, you cannot go into the menu. To go into the menu, first stop the recording or playback.

Menu Move

Move to desired menu item by using an UP(▲) or a DOWN(▼) button. In this case, a highlighted cursor is displayed in the selected item. The sub menu item is displayed if pressing a SET/STILL(⏎/❙❙) button. Selections appear in the left side and settings for selected matters appear in the right side.

Note

In general, you can use the UP(▲) or DOWN(▼) button to move to the desired menu item, but you can also use the JOG(◯). Turn the JOG(◯) counterclockwise to move the cursor downward, turn it clockwise to move the cursor upward.

Change of Settings

① Move to desired menu item by using an UP(▲) or a DOWN(▼) button.
② You can change settings by pressing the SET/STILL(⏎/❙❙) button.
③ Press the UP(▲) or DOWN(▼) button in order to change settings.
④ Settings will be changed if pressing the SET/STILL(⏎/❙❙) button after selecting desired
   settings.

Note

In general, you can use the UP(▲) or DOWN(▼) button to change the setting, but you can also use the JOG(◯).

Move to Parent Menu or Menu End

Press the MENU button to move to the parent menu from the lower mode or end the menu.

Example of menu setting (in case of changing time)

① Press the MENU button and then press the SET/STILL(⏎/II) button when the cursor
points out the **CLOCK/DISPLAY MODE SETUP**. Then following screen appears.

```
CLOCK/DISPLAY MODE SETUP

DATE                    2001-12-07
TIME                    12:00:00
DATE DISPLAY TYPE       YYYY-MM-DD
DATE & TIME DISPLAY     ON
 DATE & TIME POSITION   RIGHT
STATUS DISPLAY          ON
 STATUS POSITION        LEFT
```
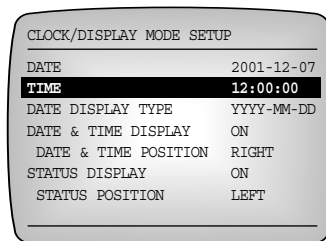
② Press the DOWN(▼) button so the cursor points out **TIME**.
Then if pressing the SET/STILL(⏎/II) button, the cursor is changed so hour may be
changed.

```
CLOCK/DISPLAY MODE SETUP

DATE                    2001-12-07
TIME                    12:00:00
DATE DISPLAY TYPE       YYYY-MM-DD
DATE & TIME DISPLAY     ON
 DATE & TIME POSITION   RIGHT
STATUS DISPLAY          ON
 STATUS POSITION        LEFT
```
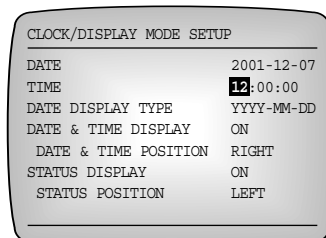
③ Press the UP(▲) or DOWN(▼) button so current time (hour) is displayed.
Then if pressing the RIGHT(►►) button, the cursor is changed so minute may be
changed.

```
CLOCK/DISPLAY MODE SETUP

DATE                    2001-12-07
TIME                    09:00:00
DATE DISPLAY TYPE       YYYY-MM-DD
DATE & TIME DISPLAY     ON
 DATE & TIME POSITION   RIGHT
STATUS DISPLAY          ON
 STATUS POSITION        LEFT
```
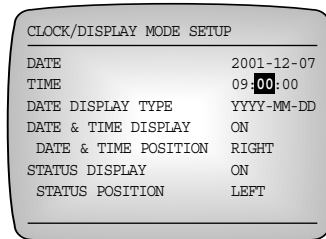
④ Similarly, press the UP(▲) or DOWN(▼) button so current minute is displayed.
Then if pressing the LEFT(◄◄) or RIGHT(►►) button, the cursor is changed so hour or
second is changed. For example, press the RIGHT(►►) button to change seconds and
setup by pressing the UP(▲) or DOWN(▼) button so current second is displayed.

```
CLOCK/DISPLAY MODE SETUP

DATE                    2001-12-07
TIME                    09:34:00
DATE DISPLAY TYPE       YYYY-MM-DD
DATE & TIME DISPLAY     ON
 DATE & TIME POSITION   RIGHT
STATUS DISPLAY          ON
 STATUS POSITION        LEFT
```
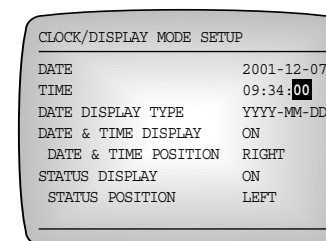
⑤ The cursor is changed as follows if pressing the SET/STILL(⏎/II) button after setting
all hours. You may change other settings by pressing the LEFT(◄◄) or RIGHT(►►)
button.

```
CLOCK/DISPLAY MODE SETUP

DATE                    2001-12-07
TIME                    12:00:00
DATE DISPLAY TYPE       YYYY-MM-DD
DATE & TIME DISPLAY     ON
 DATE & TIME POSITION   RIGHT
STATUS DISPLAY          ON
 STATUS POSITION        LEFT
```

Each menu item

① CLOCK/DISPLAY MODE SETUP

```
CLOCK/DISPLAY MODE SETUP

DATE                    2002-01-01
TIME                    12:00:00
DATE DISPLAY TYPE       YYYY-MM-DD
DATE & TIME DISPLAY     ON
  DATE & TIME POSITION  RIGHT
STATUS DISPLAY          ON
  STATUS POSITION       LEFT
```

② RECORD MODE SETUP

```
RECORD MODE SETUP

AUDIO RECORD          OFF
PICTURE QUALITY       NORMAL
PICTURE RATE          30.00FPS
DISK END MODE         STOP
  DISK END BUZZER     ON
  RECORD TIME MARK    ON
  TIME MARK POSITION  RIGHT
```

③ ALARM RECORD SETUP

```
ALARM RECORD SETUP

ALARM ENABLE            OFF
  ALARM DETECT TYPE     N.O.
ALARM BUZZER            ON
MAIN ALARM TIME         10SECOND
  PRE ALARM TIME LIMIT  2SECOND
  POST ALARM TIME LIMIT OFF
MAIN ALARM PICTURE RATE 30.00FPS
MOTION DETECTION        OFF
  SET AREA & SENSITIVITY
```

④ TIMER RECORD SETUP

```
TIMER RECORD SETUP
TIMER  DAY   START   END   FIELD RATE
OFF    ---   --:--   --:--    --.--
OFF    ---   --:--   --:--    --.--
OFF    ---   --:--   --:--    --.--
OFF    ---   --:--   --:--    --.--
OFF    ---   --:--   --:--    --.--
OFF    ---   --:--   --:--    --.--
OFF    ---   --:--   --:--    --.--
OFF    ---   --:--   --:--    --.--
OFF    ---   --:--   --:--    --.--
```

⑤ SYSTEM SETUP

```
SYSTEM SETUP

PASSWORD           ****
PASSWORD LOCK      OFF
HDD ERASE          OFF
FACTORY RESET      OFF
MENU SCREEN        DARK GRAY
LANGUAGE           ENGLISH
```

⑥ COMMUNICATION SETUP

```
COMMUNICATION SETUP

BAUD RATE          115,200
NETWORK ACCESS     ON
  IP ADDRESS       0. 0. 0. 0
  GATEWAY          0. 0. 0. 0
  SUBNET MASK      0. 0. 0. 0
NETWORK USER ID    ****
NETWORK USER PWD   ****
```

⑦ SYSTEM INFORMATION

```
SYSTEM INFORMATION
                  HDD1      HDD2
CAPACITY(GB)      80.00     NO
OVERWRITE(#)      00000     NO
VERSION           SHR301 3.11
MAC ADDRESS       ff-ff-ff-ff-ff-ff
```

⑧ BACKUP SETUP

```
BACKUP SETUP

TIME RANGE
FROM RECORD EVENT LIST
FROM ALARM EVENT LIST
SEARCH & PLAY OF BACKUP
  OVERWRITE            OFF
  SCSI ERASE           OFF
```

⚠ *Caution*

Upon shipment from the factory, the values of the menu are set as follows.

---

4 Setting of Date, Time and Screen

The following illustrates the intial setting of the **CLOCK/DISPLAY MODE SETUP** menu.

```
CLOCK/DISPLAY MODE SETUP

DATE                    2002-01-01
TIME                    12:00:00
DATE DISPLAY TYPE       YYYY-MM-DD
DATE & TIME DISPLAY     ON
  DATE & TIME POSITION  RIGHT
STATUS DISPLAY          ON
  STATUS POSITION       LEFT
```

① DATE

Set the current date.

② TIME

Time can be entered in the form of 24 hours.

⚠ *Caution*

Be sure to set the date and time to the current date and time.

③ DATE DISPLAY TYPE

There are 3 date forms to be displayed. You can set in a convenient manner to see.
[YYYY-MM-DD/DD-MM-YYYY/MM-DD-YYYY]

④ DATE & TIME DISPLAY

Set to **ON** to display the date and time on the screen, or set to **OFF** to not display them.
[ON/OFF]

⑤ DATE & TIME POSITION

Set the location on the screen where the date and time will be displayed. Set to **LEFT** to display it on the top left of the screen, or set to **RIGHT** to display it on the top right of the screen. **[LEFT/RIGHT]**

⑥ STATUS DISPLAY

Set to **ON** to display the system status, such as recording, system lock, to which HDD the data is being stored, remaining HDD capacity, and playback information when playing the recorded video; or set to **OFF** to not display them. **[ON/OFF]**

⑦ STATUS POSITION

Set the location on the screen where the system status will be displayed. Set to **LEFT** to display it on the top left of the screen, or set to **RIGHT** to display it on the top right of the screen. [**LEFT/RIGHT**]

5 Record Setup

The following illustrates the intial setting of the **RECORD MODE SETUP** menu.

```
RECORD MODE SETUP
AUDIO RECORD          OFF
PICTURE QUALITY       NORMAL
PICTURE RATE          30.00FPS
DISK END MODE         STOP
  DISK END BUZZER     ON
  RECORD TIME MARK    ON
  TIME MARK POSITION  RIGHT
```

① **AUDIO RECORD**

Set to ON to record video and audio at the same time, or set to OFF to record video only. Audio is input and recorded at 6.3 Kbps regardless of the recording field rate of the video **[ON/OFF].**

② **PICTURE QUALITY**

Picture quality is divided into four levels. Set to **VERY HIGH** for the best picture quality, or set to **HIGH**, **NORMAL**, or **LOW** in the descending order of qualty. The user can select the desired quality. **[VERY HIGH/HIGH/NORMAL/LOW]**

③ **PICTURE RATE**

Set the picture rate for the input video. If the input video signal is NTSC, a maximum of 60 FPS (Fields Per Second) can be recorded; if it is PAL, a maximum of 50 FPS can be recorded.

1) NTSC

**[60.00FPS/30.00FPS/15.00FPS/10.00FPS/7.50FPS/5.00FPS/2.50FPS/
1.00FPS/0.50FPS]**

2) PAL

**[50.00FPS/25.00FPS/12.50FPS/8.33FPS/6.25FPS/5.00FPS/2.50FPS/
1.00FPS/0.50FPS]**

Note

The following table shows how long it takes to fill the 40GB HDD with respect to each field rate when the video signal is NTSC and PAL respectively.
(Recording time for each field rate may slightly vary depending on the type of input video singal.)

Picture Rate		Time-Lapse Mode			
		VERY HIGH	HIGH	NORMAL	LOW
NTSC	60.00 FPS	11 H	15 H	20 H	26.0 H
	30.00 FPS	22.0 H	30.0 H	40.0 H	52.0 H
	15.00 FPS	33.0 H	60.0 H	80.0 H	104.0 H
	10.00 FPS	44.0 H	90.0 H	120.0 H	156.0 H
	7.50 FPS	66.0 H	120.0 H	160.0 H	207.0 H
	5.00 FPS	100.0 H	180.0 H	240.0 H	310.0 H
	2.50 FPS	200.0 H	360.0 H	480.0 H	610.0 H
	1.00 FPS	500.0 H	900.0 H	1200.0 H	1500.0 H
	0.50 FPS	1000.0 H	1800.0 H	2400.0 H	3000.0 H
PAL	50.00 FPS	13.2 H	15.0 H	20.0 H	24.0 H
	25.00 FPS	26.4 H	30.0 H	40.0 H	48.0 H
	12.50 FPS	52.8 H	60.0 H	80.0 H	96.0 H
	8.33 FPS	79.2 H	90.0 H	120.0 H	144.0 H
	6.25 FPS	105.0 H	120.0 H	160.0 H	192.0 H
	5.00 FPS	132.0 H	150.0 H	200.0 H	240.0 H
	2.50 FPS	262.0 H	300.0 H	400.0 H	480.0 H
	1.00 FPS	660.0 H	750.0 H	1000.0 H	1200.0 H
	0.50 FPS	1320.0 H	1500.0 H	2000.0 H	2400.0 H

④ **DISK END MODE**

● If you select STOP, recording will stop when you consume the full HDD space.

● If you select CONTINUE, the new data will be recorded while overwriting the existing data in the HDD from the oldest one. The relative positions where the recorded data are being stored in the HDD will be indicated on the screen in a bar format. If the **DISK END MODE** is set to **STOP**, in addition, the remaining HDD capacity will be indicated in percentage (%). Also, if the **DISK END MODE** is set to **STOP**, **HDD FREE SPACE** will be shown at the bottom of the menu, but if it is set to **CONTINUE**, it will not be shown. **[STOP/CONTINUE]**

⑤ **DISK END BUZZER**

If set to **ON**, the Buzzer will sound when the HDD is full during the recording; if set to **OFF**, the Buzzer will not sound. **[ON/OFF]**

⑥ **RECORD TIME MARK**

If set to **ON**, the recording time will be displayed during playback; if set to **OFF**, it will not be displayed. **[ON/OFF]**

⑦ **STATUS DISPLAY**

Set the location on the screen where the time of recording will be displayed during playback. Set to **LEFT** to display it on the bottom left of the screen, or set to **RIGHT** to display it on the bottom right of the screen. **[LEFT/RIGHT]**

6 Alarm Record Setup

The following illustrates the intial setting of the **ALARM RECORD SETUP** menu.

```
ALARM RECORD SETUP
ALARM ENABLE            OFF
  ALARM DETECT TYPE     N.O.
ALARM BUZZER            ON
MAIN ALARM TIME         10SECOND
  PRE ALARM TIME LIMIT  2SECOND
  POST ALARM TIME LIMIT OFF
MAIN ALARM PICTURE RATE 30.00FPS
MOTION DETECTION        OFF
  SET AREA & SENSITIVITY
```

① **ALARM ENABLE**

You shall select **ON** to start recording in the event of alarming and select **OFF** to prevent recording in the event of alarming. If you set the **ALARM ENABLE** to **ON** and exit the menu, the system will begin recording whenever alarm occurs. To force stop the recording during the alarm recording, press and hold the **STOP(■)** button for 3 seconds. Then, the recording by the current alarm will be stoppted, and the alarm recording will not be performed for the next 5 seconds even if alarm occurs. To completely stop the alarm recording, go into the menu within that 5 seconds to set the **ALARM ENABLE** to **OFF**. If no action is performed by the user for 5 seconds, the system returns to the alarm recording mode. **[ON/OFF]**

② **ALARM DETECT TYPE**

Set to **N. C.** (Normally Close) when the alarm input is Active High, and set to **N.O.**(Normally Open) when the alarm input is Active Low. **[N.C./N.O.]**

③ **ALARM BUZZER**

Set to **ON** to have the system activate the Buzzer when a motion is deteced in the input video or when alarm occurs, or set to **OFF** to keep the Buzzer inactive. **[ON/OFF]**

④ **MAIN ALARM TIME**

Set the duration for which alarm recording is to be performed when a motion is detected in the input video or when alarm occurs. The value can be set from 0 seconds to 5 minutes when you set to **OFF**. If you set to **AUTO**, the alarm recording is performed only during when the alarm signal is Active.
[5MINUTE/4MINUTE/3MINUTE/2MINUTE/1MINUTE/30SECOND/20SECOND/ 10SECOND/AUTO/OFF]

⑤ **PRE ALARM TIME LIMIT**

The pre-alarm recording is an important function which enables you to find out about the situation immediately before a motion is detected in the input video or before alarm occurs. Set how much video data you want to record before the motion is detected or alarm is triggered. About 2 seconds to 10 seconds of video data are stored in the system's SDRAM at all times. When a motion is detected or alarm is triggered, as much data as it is set in the **PRE ALARM TIME LIMIT** is taken from the SDRAM and written to the HDD as it simultaneously begins the alarm recording. However, since the capacity of the SDRAM is limited, the field rate of the pre-alarm recording will decrease as the time set in the **PRE ALARM TIME LIMIT** is increased.
[10SECOND/8SECOND/6SECOND/4SECOND/2SECOND/OFF]

⚠️ *Caution*

If the system is currently recording, the PRE ALARM TIME LIMIT settings will not be applied even when alarm occurs. The PRE ALARM TIME LIMIT settings are applied only if the system is not currently recording.

⑥ **POST ALARM TIME LIMIT**

Set the amount of video data you want to record immediately after a motion is detected in the input video or alarm is triggered. The system records as long as the time set in the **MAIN ALARM TIME**, and then records more data as long as the time set in the **POST ALARM TIME LIMIT**.
[5MINUTE/4MINUTE/3MINUTE/2MINUTE/1MINUTE/30SECOND/20SECOND/ 10SECOND/OFF]

Note

The following illustrates the temporal relationship among the main alarm recording time (MAIN ALARM TIME), pre-alarm recording time (PRE ALARM TIME LIMIT), and post alarm recording time (POST ALARM TIME LIMIT) based on the time of alarm occurrence.

Alarm Occurrence

PRE ALARM TIME LIMIT   MAIN ALARM TIME   POST ALARM TIME LIMIT

⑦ **MAIN ALARM PICTURE RATE**

Set the main alarm recording field rate. If the input video signal is NTSC, a maximum of 60 FPS can be recorded; if PAL, a maximum of 50 FPS can be recorded.

1) NTSC
[60.00FPS/30.00FPS/15.00FPS/10.00FPS/7.50FPS/5.00FPS/ 2.50FPS/ 1.00FPS/0.50FPS]

2) PAL
[50.00FPS/25.00FPS/12.50FPS/8.30FPS/ 6.25FPS/5.00FPS/2.50FPS/ 1.00FPS/0.50FPS]

⑧ **MOTION DETECTION**

The DVD will start recording images whenever it detects any movement only when **ALARM ENABLE** is set to **ON**. At this time, you can set the detailed items about the motion detection in the **SET AREA & SENSITIVITY** menu. To force stop the recording started by the motion detection, press and hold the STOP(■) button for 3 seconds. Then, the recording started by the motion detection will be paused for 5 seconds, during which time you should go into the menu and set the **MOTION DETECTION** to **OFF** to completely stop the recording. If no action is performed by the user for 5 seconds, the system resumes the recording started by motion detection. **[ON/OFF]**

⚠️ *Caution*

When performing the recording started by motion detection, the recording time is determined by the the time set in MAIN ALARM TIME, PRE ALARM TIME LIMIT, and POST ALARM TIME LIMIT as it was the case in the alarm recording.

⑨ **SET AREA & SENSITIVITY**

1) AREA
Areas for motion detection are 4 in total and you can set the **LEVEL**, **SIZE**, and **MOVE** for each area. When you go into **SET AREA & SENSITIVITY** menu, the following screen appears and the cursor is positioned at the AREA item. At this time, press the UP(▲) or DOWN(▼) button to select the desired area (AREA 0 ~ AREA 3), and press the SET/STILL(↵/‖) button to move the cursor to the **LEVEL** item to set the sensitivity level for the selected area. **[0/1/2/3]**

AREA=0 LEVEL=OFF [SIZE][MOVE]

AREA 0   AREA 1

AREA 2   AREA 3
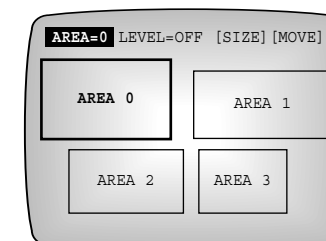
2) LEVEL
Sensitivity to motion can be set from **LOW** to **HIGH+**, or to **OFF**. Closer to **HIGH**, more resensitive to motion, closer to **LOW**, more insensitive to motion.
Press the UP(▲) or DOWN(▼) button to set the sensitivity level, and press the SET/STILL(↵/‖) button to move the cursor to the SIZE item to set the size of the motion detection area.
[OFF/LOW/LOW+/MIDDLE/MIDDLE+/HIGH/HIGH+]

```
AREA=2 LEVEL=OFF [SIZE] [MOVE]


        AREA 2
```
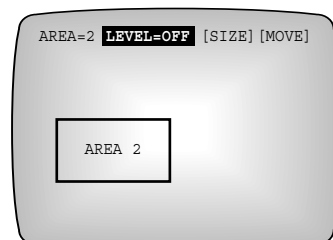
3) SIZE

Set the size of the area currently selected. Press the UP(▲) button to increase the size of the area vertically, or press the DOWN(▼) button to decrease the size of the area vertically. Press the RIGHT(▶▶) button to increase the size of the area horizontally, or press the LEFT(◀◀) button to decrease the size of the area horizontally. After setting the size, press the SET/STILL(⏎/Ⅱ) button to move the curstor so that you can set the **MOVE** item.

```
AREA=2 LEVEL=MIDDLE [SIZE] [MOVE]
```
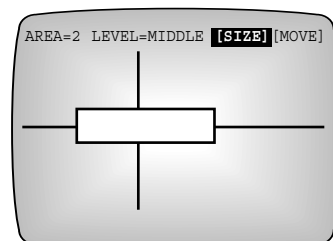
4) MOVE

Set the position of the area currently selected. Press the UP(▲) or DOWN(▼) button to change the position of the area vertically, or press the LEFT(◀◀) or RIGHT(▶▶) button to change the position of the area horizontally. After setting them all up, press the SET/STILL(⏎/Ⅱ) button to move the cursor to the **AREA** item so that you can set each item for other areas.

```
AREA=2 LEVEL=MIDDLE [SIZE] [MOVE]
```

7 Reservation Record Setup
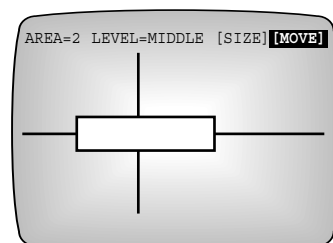
The following illustrates the intial setting of the **TIMER RECORD SETUP** menu.

```
TIMER RECORD SETUP
TIMER  DAY   START    END    FIELD RATE
 OFF   ---  --:--   --:--     --.--
 OFF   ---  --:--   --:--     --.--
 OFF   ---  --:--   --:--     --.--
 OFF   ---  --:--   --:--     --.--
 OFF   ---  --:--   --:--     --.--
 OFF   ---  --:--   --:--     --.--
 OFF   ---  --:--   --:--     --.--
 OFF   ---  --:--   --:--     --.--
 OFF   ---  --:--   --:--     --.--
 OFF   ---  --:--   --:--     --.--
```

● Timer recording enables the system to automatically record when you are not present so that the recording is performed on the desired day at the desired time with the desired field rate. First position the cursor at the line where **TIMER** row is set to **OFF** to set it to **ON**, select the desired day from the **DAY** row, and enter the recording start and end time into **START** and **END** row respectively. Also, set the field rate to be applied during recording in the **FIELD RATE** row. If you set the **DAY** from **SUN** to **SAT**, the timer recording setting is applied only to the corresponding days, but if you set it to **DAILY**, the timer recording setting is applied to all days of the week. **FIELD RATE** can be set from 0.50 FPS to 60 FPS if the input video signal is NTSC and from 0.50 FPS to 50 FPS if it is PAL. Once the timer recording is set, the recording will be made on the corresponding day for the duration of entered time. Other recording settings, except the field rate, follow the basic recording settings. To force stop the recording, press and hold the STOP(■) button for 3 seconds. Then, the recording will pause for 5 seconds. If no action is performed by the user for 5 seconds, the system determines whether the timer recording setup time is elapsed and resumes the recording it not. To completely stop the recording, go into the menu within 5 seconds to set the **TIMER** item of the corresponding line to **OFF**.
Timer recording can be set for up to 11 different times.

8 System Setup

The following illustrates the intial setting of the **SYSTEM SETUP** menu.

```
SYSTEM SETUP
PASSWORD              ****
PASSWORD LOCK         OFF
HDD ERASE             OFF
FACTORY RESET         OFF
MENU SCREEN           DARK GRAY
LANGUAGE              ENGLISH
```

① **PASSWORD**

Set the system password. You can enter a 4-digit number and the initial set value is 0000.

② **PASSWORD LOCK**

If you set this to **ON**, you can ask for a password, which is set in the **PASSWORD**, each time the MENU button is pressed or the recording lock cancellation is attempted during the recording, and stop the respective operation if wrong password is entered. If set to **OFF**, you do not have to enter password for each case metioned above. **[ON/OFF]**

③ **HDD ERASE**

If you set to **ON** and exit the menu, the system will delete all data stored on the HDD. **[ON/OFF]**

⚠ **Caution**

Verify once again that is is OK to delete the data, as deleted data cannot be restored.

④ **FACTORY RESET**

If you set to **ON** and finish the menu, all settings will be restored to their factory default settings. However, the data on the HDD will not be deleted. **[ON/OFF]**

⑤ **MENU SCREEN**

If this is set to **DARK GRAY**, the background of the screen becomes darker when the MENU button is pressed and you will not be able to see the characters clearly. If set to **OFF**, you can see the current video clearly even when the MENU button is pressed. **[DARK GRAY/OFF]**

⑥ **LANGUAGE (MULTI-LANGUAGE SUPPORT)**

Besides English, multi-language support provides German, French, Italian, and Spanish. You can conveniently set the desired language. The default language is set to English. **[ENGLISH/DEUTSCH/FRANÇAIS/ESPAÑOL/ITALIANO]**

9 Communication Setup

The following illustrates the intial setting of the **COMMUNICATION SETUP** menu.

```
COMMUNICATION SETUP
BAUD RATE             115,200
NETWORK ACCESS        ON
 IP ADDRESS           0. 0. 0. 0
 GATEWAY              0. 0. 0. 0
 SUBNET MASK          0. 0. 0. 0
NETWORK USER ID       ****
NETWORK USER PWD      ****
PAN/TILT TYPE         SCC-641
```

① **BAUD RATE**

Sets data transmission rate in RS-232C communication. **[4,800/9,600/19,200/38,400/115,200]**

② **NETWORK ACCESS/IP ADDRESS/GATEWAY/SUBNET MASK**

If the system is connected to a LAN, it can be controlled from the remote surveillance program installed on a remote PC. To connect to a LAN, set the **NETWORK ACCESS** to **ON**, and configure the **IP ADDRESS**, **GATEWAY**, **SUBNET MASK**, etc. to suit the user's network environment. Then, connect the LAN Cable to the LAN Cable connection terminal on the back of the system and reboot the system. If at least one from the **IP ADDRESS**, **GATEWAY**, and **SUBNET MASK** is modified, the system must be rebooted to apply the modified setting to the system.

③ **NETWORK USER ID/NETWORK USER PWD**

In order to access the system through a LAN from a remote surveillance program installed on a remote PC, the user ID and password must be entered. At this time, the user ID and password entered match the ones set in the **NETWORK USER ID** and **NETWORK USER PWD**, you can connect to the system; otherwise, you cannot gain access. Both are 4-digit numbers and the initial set values are 0000.

④ **PAN/TILT TYPE (Remote Control of Camera)**

The remote monitoring program installed in the PC can control Pan/Tilt/Zoom of the camera through the LAN cable. You shall choose a camera to be controlled. But the camera using the SEC protocol can be controlled. Please refer to the Remote Monitoring Program User's Manual for the detailed camera control by the remote monitoring program.

10 System Information

The following illustrates the intial setting of the **SYSTEM INFORMATION** menu.

```
SYSTEM INFORMATION
                    HDD1    HDD2
CAPACITY(GB)        80.00     NO
OVERWRITE(#)        00000     NO
VERSION             SHR301 3.11
MAC ADDRESS         ff-ff-ff-ff-ff-ff
```

● It displays the basic system information.
Because you can connect maximum of 2 HDD's, if the capacity for each (GB: Giga Byte) and the **DISK END MODE** of the **RECORD MODE SETUP** menu are set to **OVER-WRITE**, you can find out in the **CAPACITY(GB)** and **OVERWRITE(#)** the information about how many times a HDD is currently being overwritten.
VERSION indicates the software version installed on the system and MAC ADDRESS indicates the MAC Address entered in the system.

11 SCSI HDD BACKUP

You shall connect this DVR to an external SCSI HDD with a connector to backup or replay the video or audio signal stored in the main body HDD. The external SCSI HDD is the only backup device of this DVR.
Here comes the **BACKUP SETUP** menu.

```
BACKUP SETUP

TIME RANGE
FROM RECORD EVENT LIST
FROM ALARM EVENT LIST
SEARCH & PLAY OF BACKUP
 OVERWRITE              OFF
 SCSI ERASE             OFF
```

BACKUP SETUP backups or replays the video or audio signal stored in the main body HDD in the external SCSI HDD through the SCSI.

(1) TIME RANGE

If you choose **TIME RANGE** in the **BACKUP SETUP** menu, the detailed **TIME RANGE** setup screen will appear. You shall designate the start and finish time of backup on your own so that **TIME RANGE** can save the video and audio signal in the SCSI HDD only in the designated period.

```
TIME RANGE

FROM        DATE       2003.01.01
            TIME       12:00:00
TO          DATE       2003.01.01
            TIME       12:00:00

[START]


SYSTEM HDD 70.8GB / 80.8 GB [1]
SCSI HDD    15.1GB / 18.1 GB [1]
```

Press the JOG(◯) or UP(▲), DOWN(▼) button to move the cursor. The selected items will be highlighted. Then press the SET/STILL button(↵/II) and the LEFT(◀◀) or RIGHT(▶▶) button to move to the next selection item(DATE or TIME). Then press the JOG(◯) or UP(▲), DOWN(▼) button to type in the date, start time, and finish time of the image to be backed up and press the SET/STILL button(↵/II) to wrap up the selection.

① **FROM DATE 2003 . 01 . 01** (Backup Start Date)

You can set the date to start backing up the video and audio signal saved in the HDD in the SCSI HDD.

② **TIME12 : 00 : 00** (Backup Start Date)

You can set the date to start backing up the video and audio signal saved in the HDD in the SCSI HDD.

③ **TO DATE 2003 . 01 . 01** (Backup Finish Date)

You can set the date to finish backing up the video and audio signal saved in the HDD in the SCSI HDD.

④ **TIME 12 : 00 : 00** (Backup Finish Date)

You can set the date to finish backing up the video and audio signal saved in the HDD in the SCSI HDD.

⑤ **SYSTEM HDD 70.8GB/80.8GB[1]** (Total space and free space of the main body HDD)

It displays the DVR main body HDD space. The current message reads a HDD with the 80.8GB capacity(Free Space [70.8GB]/Total HDD Space [80.8GB]) and [1] indicates the system can contain 2 HDDs in full but it is now using the first HDD. Here, the text, '70.8GB' indicates the system consumed 10GB out of the total 80.8GB capacity.
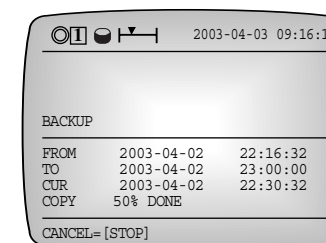
⑥ **SCSI HDD 15.1GB /18.1GB [1]** (Total space and free space of external SCSI HDD)

It displays the number and capacity of the SCSI HDD connected to the SCSI Jack behind the main body. The current message reads a HDD with the 18.1GB capacity(Free Space [15.1GB]/Total SCSI HDD Space [18.1GB]) and [1] indicates the system can contain 2 external HDDs in full but it is now using the first HDD. Here, the text, '15.1GB' indicates the system consumed 3GB out of the total 18.1GB capacity.

⑦ **START** (Starting Backup)

After you type in the start and finish date/time of backup, press the JOG(◯) or UP(▲), DOWN(▼) button to move to START. Then you will see START highlighting. If you press the SET/STILL button(⏎/❙❙) now, a text, 'SEARCH' will pop up to search the image data from the HDD to be backed up. Now, backup process will begin.

⑧ **Backup Screen**

```
◯① ⏏ ⊢⊤⊣          2003-04-03 09:16:12

BACKUP

FROM      2003-04-02      22:16:32
TO        2003-04-02      23:00:00
CUR       2003-04-02      22:30:32
COPY      50% DONE

CANCEL= [STOP]
```

ⓐ **FROM 2003 - 04 - 02 22 : 16 : 32** (Displaying the backup start time)

The **TIME RANGE** screen displays the backup start time.

ⓑ **TO 2003 - 04 - 02 23 : 00 : 00** (Displaying the backup finish time)

The **TIME RANGE** screen displays the backup finish time.

ⓒ **CUR 2003 - 04 - 02 22 : 30 : 32** (Displaying the current backup time)

The **TIME RANGE** screen displays the current backup time.

ⓓ **COPY 50 %DONE**(Displaying the backed-up capacity)

The **TIME RANGE** screen displays how much capacity has been backed up.

ⓔ **CANCEL = [STOP]**

You shall press the STOP [■] button to stop the backup process. If not, the system will backup the selected capacity by 100% and stop the process automatically. Then it escapes from the SCSI and shows the LIVE screen.

⚠ *Caution*

– During the SCSI backup process, you may not record or replay data in the DVR main body HDD nor you may communicate through LAN.
– The date and time in the backup screen indicates the time when the main body starts recording in the HDD.
– The backup process continues until the end of the SCSI HDD. Then replace the SCSI HDD or use the same SCSI HDD to continue recording. If you use the same SCSI HDD, the system will return to the initial part of the SCSI HDD while overwriting the existing image record data.

(2)FROM RECORD EVENT LIST (Backup by the record event list)

When you press the RECORD key in the main body HDD for recording or you have recorded data for long, the event list will be created at an interval. If you use this function for recording, you will be able to locate the backup position more conveniently than TIME RANGE BACKUP. The following screen illustrates the detailed setup screen of **FROM RECORD EVENT LIST** and the EVENT(RECORD START), time, and date are based on the HDD recording. If you press the MENU button, the MENU screen will pop up to escape the **FROM RECORD EVENT LIST** screen.

```
RECORD EVENT BACKUP
 ID    EVENT       DATE      TIME
 01  RECORD START  2003-04-02  13:27:39
 02  RECORD START  2003-04-02  13:29:50
 03  RECORD START  2003-04-02  14:00:30
 04  RECORD START  2003-04-02  15:01:35



EXIT = [MENU]   SELECT = [SET/STILL]
```

Press the JOG(◯) or UP(▲), DOWN(▼) button to move the cursor. The selected items will be highlighted. Once you move to the **EVENT LIST** part to be backed up, press the SET/STILL button(⏎/❚❚) then the following screen will appear. The following screen shows an example when you select ID 01 in the above screen.

```
TIME RANGE

FROM        DATE      2003.04.02
            TIME      13:27:39
TO          DATE      2003.04.02
            TIME      13:27:39

[START]


SYSTEM HDD 70.8GB / 80.8 GB  [1]
SCSI HDD   15.1GB / 18.1 GB  [1]
```

Please refer to Page 3-26, 'The **TIME RANGE** Handling Method' for the detailed usage of the above screen.

Set the date and time according to the usage of **TIME RANGE** and press the JOG(◯) or UP(▲), DOWN(▼) button to move the cursor with **[START]** in the above screen. Then if you press the SET/STILL button(⏎/❚❚), the backup screen will popup to start backup process.

Please refer to Page 3-28 for the detailed usage of the backup screen.

(3) FROM ALARM EVENT LIST (Backup by the alarm event list)

FROM ALARM EVENT LIST BACK UP is used to back up the video and audio data at the time of alarm event created by alarm or movement detection in the external SCSI HDD from the main body HDD. The following screen shows the detailed setup procedure of **FROM ALARM EVENT LIST** and the EVENT(RECORD START), date, and time in the following screen are based on the HDD recording. If you press the MENU button, the MENU screen will pop up to escape the FROM RECORD EVENT LIST screen.

```
ALARM EVENT BACKUP
 ID     EVENT      DATE      TIME
 01  RECORD START  2003-04-02  13:27:39
 02  RECORD START  2003-04-02  13:29:50
 03  RECORD START  2003-04-02  14:00:30
 04  RECORD START  2003-04-02  15:01:35



EXIT = [MENU]   SELECT = [SET/STILL]
```

Press the JOG(◯) or UP(▲), DOWN(▼) button to move the cursor. The selected items will be highlighted. Once you move to the **EVENT LIST** part to be backed up, press the SET/STILL button(⏎/❚❚) then the following screen will appear. The following screen shows an example when you select ID 01 in the above screen.

```
TIME RANGE

FROM        DATE      2003.04.02
            TIME      13:27:39
TO          DATE      2003.04.02
            TIME      13:27:39

[START]


SYSTEM HDD 70.8GB / 80.8 GB  [1]
SCSI HDD   15.1GB / 18.1 GB  [1]
```

Please refer to Page 3-26, 'The **TIME RANGE** Handling Method' for the detailed usage of the above screen.

Set the date and time according to the usage of **TIME RANGE** and press the JOG(◯) or UP(▲), DOWN(▼) button to move the cursor with **[START]** in the above screen. Then if you press the SET/STILL button(⏎/❚❚), the backup screen will popup to start backup process.

Please refer to Page 3-28 for the detailed usage of the backup screen.

(4) SEARCH & PLAY OF BACK UP (Backup image search and replay)

SEARCH & PLAY OF BACK UP is used for the search and replay of the backup data in the SCSI HDD. The following screen shows the detailed setup procedure of **SEARCH & PLAY OF BACK UP** and the EVENT(RECORD START), date, and time in the following screen are based on the HDD recording. If you press the MENU button, the MENU screen will pop up to escape the FROM RECORD EVENT LIST screen.

```
SEARCH & PLAY OF BACKUP
ID      EVENT      DATE        TIME
01  RECORD START  2003-04-02  13:27:39
02  RECORD START  2003-04-02  13:29:50
03  RECORD START  2003-04-02  14:00:30
04  RECORD START  2003-04-02  15:01:35




EXIT = [MENU]   SELECT = [SET/STILL]
```

If you use **SEARCH & PLAY OF BACK UP**, you can select and replay only images that you want to from the backup device memory. Press the JOG( ) or UP(▲), DOWN(▼) button to move the cursor. The selected items will be highlighted. Once you move to the EVENT LIST part to be backed up, press the SET/STILL button( ) then the screen will search the image recording the selected EVENT from the SCSI HDD and display a still image at the time. Then, If you press the PLAY (▶) button, the SCSI HDD will replay the image and if you use JOG( ) or SHUTTLE( ) or press the LEFT(▶▶) or RIGHT (◀◀) button, you will be able to choose Still Screen, Slow Screen, or Fast Screen, which enables convenient image signal search. During the SCSI plays, the message, 'SCSI PLAY' appears at the screen bottom. If you want to escape from SCSI PLAY, press the STOP [■] button, then the Live screen pops up. Now, the message, 'SCSI SELECTED EXIT=[STOP]' appears at the screen bottom to indicate the system selected the SCSI HDD. In short, if you press the PLAY(▶) button when you see the above message, the image signal backed up in the SCSI HDD will be played. If you want to escape from the SCSI completely, press the STOP [■] button.

(5) OVERWRITE

Whether you set it to OFF or ON when the SCSI HDD is full of data during the data backup process, the system pauses backup or continues backup while overwriting the existing data respectively. Then, the oldest data will be overwritten first. **[OFF/ON]**

(6) SCSI ERASE (SCSI HDD Recording Deletion Mode Setup)

SCSI ERASE in the **BACKUP SET UP** menu is used to erase all the image signal backed up in the SCSI HDD. Press the JOG( ) or UP(▲), DOWN(▼) button to move the cursor until **SCSI ERASE** is highlighted. Then, if you press the SET/STILL( ) button, the system will start erasing the image signal while the screen turns yellow.

```
ERASE SCSI DATA
DELETE FILES 42%
```
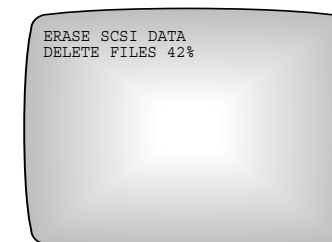
DELECT FILES 42% indicates 42% of the current SCSI HDD image signal has been erased. Upon completion, the system converts to the LIVE screen automatically.

[OFF/ON]

Reference
-SCSI Backup Speed : 3MByte/sec
Ex) How long does it take to back up the image data with 10 minite lap time in the SCSI HDD if the data was recorded in;
   1)VERY HIGH/60 FIELD : 10 min.
   2)HIGH/60/ FIELD : approx. 7 min.
   3)NORMAL/60 FIELD : approx. 5 min.
   4)NORMAL/30 FIELD : approx. 2.5min.
   5)LOW/30 FIELD : approx. 2min.

IV. Record

1 Basic Record

## Basic Record

① CURRENT IMAGE RECORD

Press the RECORD(●) button to record current image. If doing so, the light of the RECORD(●) button turns on and record starts while following message appears on the screen. Settings related with record are done in the **RECORD MODE SETUP** menu.

```
◎ I ⊢▼⊣          2001-08-22 18:19:12



           O RECORD ON O
```

....
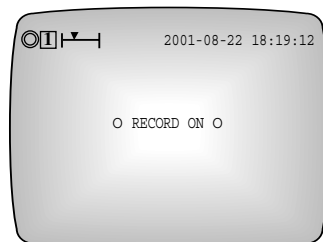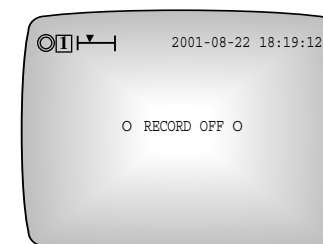
Note

- *Recording is possible both when the system is in the Live screen mode or in the playback mode. However, whereas the Live screen currently showing will be recorded when the system is in the Live screen mode, the video that is currently being input separate from the screen currently being played will be recorded when the system is in the playback mode.*

- *While the user is in the menu, pressing the RECORD(●) button will not start the recording. To start the recording, first exit the menu.*

....

If the incoming video signal is disconnected during recording, recording will be stopped. But, if the incoming video signal is reconnected, the system recognizes this and start to record again. In addition, when pressing RECORD(●) button without connecting any video signals to the input port, the following Message is shown on the screen and the system will not carry out the recording function.

```
◎ I ⊢▼⊣          2001-08-22 18:19:12



         O NO VIDEO INPUT O
```
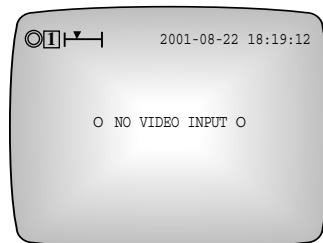
② RECORD STOP

Press the STOP(■) button for 3 seconds to stop recording. Then, the light will go off in the RECORD(●) button and recording will stop with the following message on the bottom of the screen.

```
◎ I ⊢▼⊣          2001-08-22 18:19:12



          O  RECORD OFF O
```

....

Note

Menu screen will not be displayed even if the MENU button is pressed during recording. If the MENU button is pressed during the recording, the following message will appear. To view the menu screen, the recording must be stopped.

```
◎ I ⊢▼⊣          2001-08-22 18:19:12



       O  PLEASE STOP RECORD O
```

....
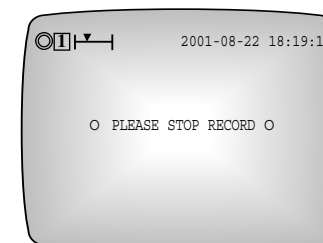
2 Record Lock

Record Lock

Press the REC LOCK button during recording to lock the recording. Then, the LOCK status indicator LED and the REC LOCK button will light up. At this time, pressing the STOP(■) button will not stop the recording. An 🔒 icon appears on the top left of the screen when in the Recording Lock mode.
(Please refer to "Viewing Screen during Recording" on p. 3-5.)

Record Lock Release

Press the REC LOCK button while in the Recording Lock mode to cancel the Recording Lock. Then, the lights in the LOCK status indicator LED and REC LOCK button will turn off. At this time, pressing the STOP(■) button will stop the recording. If the **PASSWORD LOCK** of the **SYSTEM SETUP** menu is set to **ON**, you must enter a password to cancel the recording lock. At this time, if the password entered matches the one set in the **PASS-WORD** of the **SYSTEM SETUP** menu, then the recording lock will be cancelled; other-wise, it will not be cancelled.

3 Alarm Record

Record in Alarm Occurrence

There is an alarm input terminal (ALARM IN) on the external I/O port at the back panel of the SHR-3010 system. Connect here the alarm output terminal of an external device, such as Multiplexer. (**For detailed information on connections, please refer to "3. System Connection for Alarm Recording" on p. 2-3.**) Next, set the **ALARM ENABLE** of the **ALARM RECORD SETUP** menu to **ON** to begin recording whenever alarm is triggered. Also, set the **MOTION DETECTION** of the **ALARM RECORD SETUP** menu to **ON** to begin the alarm recording whenever a motion is detected within the area set in the **SET AREA & SENSITIVITY**.

Release of Alarm Record

If the system is not in the alarm recording mode, in order to cancel the alarm recording mode, set the ALARM ENABLE and MOTION DETECTION of the **ALARM RECORD SETUP** menu to **OFF**. To force stop the recording during the recording started by an alarm, press and hold the STOP(■) button for 3 seconds. Then, the recording by the current alarm will be stoppted, and the alarm recording will not be performed for the next 5 seconds even if alarm occurs. To completely stop the alarm recording, go into the menu within those 5 seconds to set the **ALARM ENABLE** to **OFF**. If no action is performed by the user for 5 seconds, the system returns to the alarm recording mode.

4 Reservation Record

Reservation Record Setup

You can enter the day, time, and field rate for the timer recording in the **TIMER RECORD SETUP** menu so that the recording will be made on the set day for the set amount of time.

Reservation Record Cancel

If the system is not in the timer recording mode, in order to cancel the timer recording, set the **TIMER** row of the line you want to cancel to **OFF** in one of the timer recording list set in the **TIMER RECORD SETUP** menu. However, if you want to force stop the timer recording during the recording, press and hold the STOP(■) button for 3 seoncs. Then, the recording will pause for 5 seconds. If no action is performed by the user for 5 seconds, the system determines whether the timer recording setup time is elapsed and resumes the recording it not. To completely stop the recording, go into the menu within 5 seconds to set the **TIMER** item of the corresponding line to **OFF**.

⚠ Caution

To stop the recording when you are recording by pressing the RECORD(●) button , shortly press the STOP(■) button. However, if you want to stop the recording which isthe alarm or motion recording or timer recording, you should press and hold the STOP(■) button for 3 seconds. This is to give the user an opportunity to change the- menu settings to completely stop the recording after pressing and holding the STOP(■) button for 3 seconds to force stop the recording. Because if the system is in the recording mode by alarm or motion detection, or in the timer recording mode, there is no special method for the user to arbitrarily stop the recording and the user cannot go into the menu during the recording, unless an alarm or motion is not detected or the timer recording setting time is not elapsed.
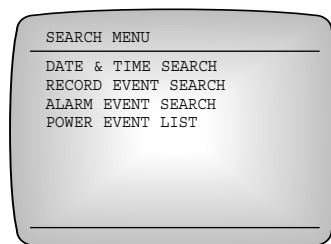
V. Retrieval and Playback

1 Retrieval Menu View

Retrieval Menu Enter

Press the SEARCH button to retrieve recorded data.

If doing so, following screen appears.

```
SEARCH MENU

DATE & TIME SEARCH
RECORD EVENT SEARCH
ALARM EVENT SEARCH
POWER EVENT LIST
```

Note

- *All recorded data can be searched if the system is in the Live screen mode, the recording mode, or the playback mode.*

- *If in in the playback mode, when you try to search the recorded data to play back, a newly searched data is played back regardless of which data has previosly been played back.*

- *While the user is in the menu, pressing the SEARCH button will not take you to the search menu. To go into the search menu, first exit the menu.*

Menu Move

Use the UP(▲) or DOWN(▼) button to move to the desired menu item. At this time, a highlighted cursor is shown by the selected item. Then, press the SET/STILL(◄┘/II) button to go into a sub-menu. In the sub-menu, you can enter enquiries for data search or select and play back the desired data from the list of recorded data.
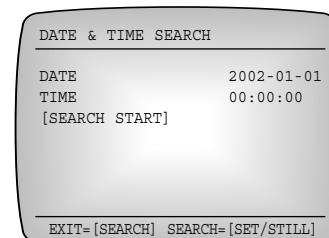
Retrieval Condition Enter and List Item Select

Enter enquiries for data search in the **DATA & TIME SEARCH** menu, and select one from the list of recorded data in the **RECORD EVENT SEARCH** and **ALARM EVENT SEARCH** menus. The method of entering enquiries for data search or selecting one from the list is same as in a regular menu.
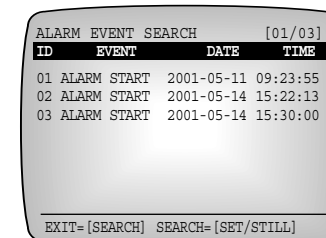
Upper Menu Move and Menu End

Press the SEARCH button to move from the lower menu to the upper menu or end menu.
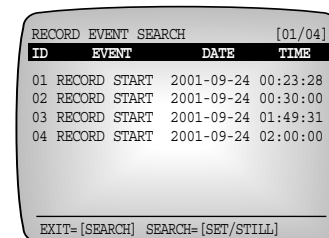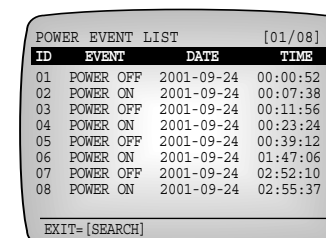
Each Menu Item

① CLOCK/DISPLAY MODE SETUP

```
DATE & TIME SEARCH

DATE            2002-01-01
TIME            00:00:00
[SEARCH START]




   EXIT=[SEARCH]  SEARCH=[SET/STILL]
```

③ ALARM EVENT SEARCH

```
ALARM EVENT SEARCH        [01/03]
ID    EVENT       DATE       TIME

01 ALARM START  2001-05-11 09:23:55
02 ALARM START  2001-05-14 15:22:13
03 ALARM START  2001-05-14 15:30:00




   EXIT=[SEARCH]  SEARCH=[SET/STILL]
```

② RECORD EVENT SEARCH

```
RECORD EVENT SEARCH       [01/04]
ID    EVENT       DATE       TIME

01 RECORD START  2001-09-24 00:23:28
02 RECORD START  2001-09-24 00:30:00
03 RECORD START  2001-09-24 01:49:31
04 RECORD START  2001-09-24 02:00:00



   EXIT=[SEARCH]  SEARCH=[SET/STILL]
```

④ POWER EVENT LIST

```
POWER EVENT LIST          [01/08]
ID    EVENT       DATE       TIME
01  POWER OFF  2001-09-24  00:00:52
02  POWER ON   2001-09-24  00:07:38
03  POWER OFF  2001-09-24  00:11:56
04  POWER ON   2001-09-24  00:23:24
05  POWER OFF  2001-09-24  00:39:12
06  POWER ON   2001-09-24  01:47:06
07  POWER OFF  2001-09-24  02:52:10
08  POWER ON   2001-09-24  02:55:37

   EXIT=[SEARCH]
```

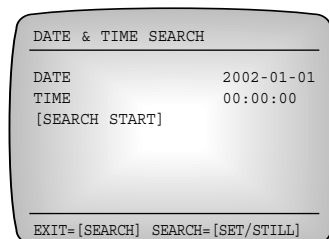### ⚠ Caution

- *When you go into the DATE & TIME SEARCH menu, the current date and time will be displayed by the DATE and TIME fields. Enter the desired date and time to search the recorded data.*

- *No list will be displayed when you go into the RECORD EVENT SEARCH, ALARM EVENT SEARCH, and POWER EVENT LIST menus because there is no data in the HDD when it is first shipped from the factory.*
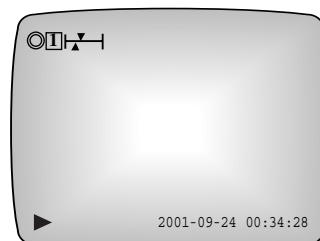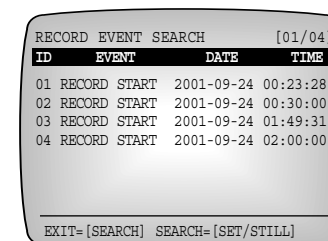
2 Retrieval by Date and Time

```
DATE & TIME SEARCH

DATE              2002-01-01
TIME                00:00:00
[SEARCH START]


EXIT=[SEARCH] SEARCH=[SET/STILL]
```

Following screen appears and light of the PLAY(▶) button flickers if pressing the SET/STILL (⏎/❚❚) button after entering date and time to retrieve and placing the cursor at search.

```
◎①⊦▼┥



     ○  SEARCH  ○


❚❚             2001-09-24 00:30:00
```
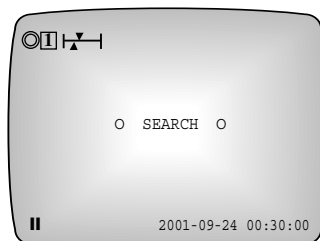
You can play retrieval data if pressing the PLAY(▶) button. Press the STOP(■) button to stop play. Following screen is a screen appearing when pressing the PLAY(▶) button. Date and time below the screen show when currently played data are recorded and figures at the far end shows which times of frame of the relevant second.

```
◎①⊦▼┥




▶              2001-09-24 00:34:28
```

3 Recorded Data List View

```
RECORD EVENT SEARCH        [01/04]
ID     EVENT         DATE       TIME
01 RECORD START   2001-09-24 00:23:28
02 RECORD START   2001-09-24 00:30:00
03 RECORD START   2001-09-24 01:49:31
04 RECORD START   2001-09-24 02:00:00


EXIT=[SEARCH] SEARCH=[SET/STILL]
```

The data on the HDD will be displayed as a list based on the recording start time. The list will be updated every 30 minutes. Therefore, the system will create a new list at every half-hour on the hour during the recording.

The system begins the recording when the RECORD(●) button is pressed, or when a motion is detected or alarm is triggered, or when the timer recording time is up, here the list of the data recorded by motion detection or alarm occurrenceis not displayed.

Position the cursor at one of items on the list of the recorded data and press the SET/STILL (⏎/❚❚) button, then the following screen appears and the PLAY(▶) button flashes.

```
◎①⊦▼┥



     ○ SEARCH ○


❚❚             2001-09-24 00:23:28
```
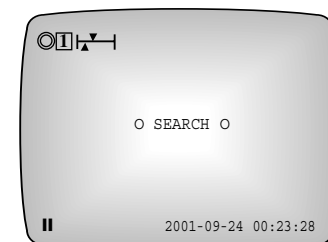
At this time, if you press the PLAY(▶) button, the selected data will be played back. To stop the playback, press the STOP(■) button for 3 seconds. The below screen is the screen when pressing the PLAY(▶) button.

```
◎①⊦▼┥




▶              2001-09-24 00:23:44
```
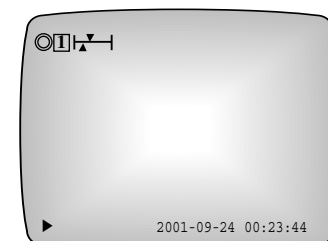
4 Alarm Record Retrieval

```
ALARM EVENT SEARCH          [01/03]
ID   EVENT        DATE       TIME

01 ALARM START   2001-05-11 09:23:55
02 ALARM START   2001-05-14 15:22:13
03 ALARM START   2001-05-14 15:30:00




EXIT=[SEARCH] SEARCH=[SET/STILL]
```

Among the data on the HDD, the ones that were recorded when a motion was detected or alarm was triggered will be displayed as a list based on the recording start time.
Other information is same as in "3. Recorded Data List View" on p. 5-4.

Note

If the list of the recorded data cannot be shown in a screen, you can use the LEFT(◄◄) or RIGHT(►►) button to view the list in pages. Press the LEFT(◄◄) button to move to the previous page, or press the RIGHT(►►) button to move to the next page.

# 5 Power On/Off Status List View

```
POWER EVENT LIST          [01/08]
ID   EVENT       DATE       TIME

01  POWER OFF  2001-09-24  00:00:52
02  POWER ON   2001-09-24  00:07:38
03  POWER OFF  2001-09-24  00:11:56
04  POWER ON   2001-09-24  00:23:24
05  POWER OFF  2001-09-24  00:39:12
06  POWER ON   2001-09-24  01:47:06
07  POWER OFF  2001-09-24  02:52:10
08  POWER ON   2001-09-24  02:55:37

EXIT=[SEARCH]
```

Dates and times the system power had been turned On and Off will be shown in order.

6 Basic Playback

Press the PLAY(►) button to immediately play back the data recorded on the HDD. Then, the PLAY (►) button lights up, the following screen appears, and the beginning of the recorded data is played back in turn.

```
○①⌐⌐
               O PLAY O

►              2001-09-24 00:23:44
```
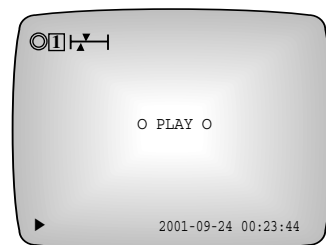
Note

- **They can all be played back if the system is in the Live screen mode or in the recording mode.**

- **While the user is in the menu, pressing the PLAY(►) button will not start the playback. To start the playback, first exit the menu.**

To stop the playback, press the STOP(■) button. Press the PLAY(►) button again to resume playback from where you last stopped. The following message will appear and the playback will stop when the data reaches the end of the HDD during playback. Press the PLAY(►) button again to play back from the beginning of the data.

```
○①⌐⌐       2001-09-24 02:24:03

            O DATA END O
```
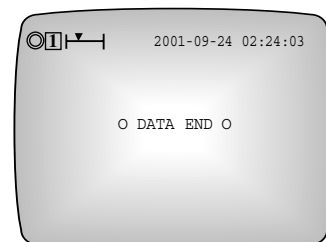
The light of SET/STILL(⏎/Ⅱ) button turns and the light of the PLAY(►) button flickers if pressing the SET/STILL(⏎/Ⅱ) button during play. And following screen appears and it reaches a temporary still status. In this case, you can see a still screen per frame forward or backward if pressing the RIGHT(►►) or LEFT(◄◄) button.

```
○①⌐⌐

Ⅱ              2001-09-24 00:33:42
```

To play back again, pres the SET/STILL(⏎/Ⅱ) or PLAY(►) button.

Note

Menu screen will not be displayed even if the MENU button is pressed during play back. If the MENU button is pressed during playback, the following message will appear. To view the menu screen, the playback must be stopped.

```
○①⌐⌐       2001-09-24 02:24:03

        O PLEASE STOP PLAY OR STILL O
```
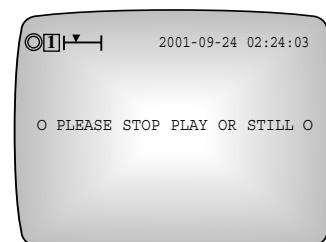
7 Various Screen View Using JOG/SHUTTLE

Play in Various Speed

The data recorded on the HDD will be played back as it is recorded. For example, if the PICTURE QUALITY of the RECORD MODE SETUP is set to NORMAL and if the recording is made with the PICTURE RATE set to 5.00FPS, then a Normal quality video will be played back at 5 FPS as it is recorded.

To vary the playback speed, press the LEFT(◄◄) or RIGHT(►►) button during playback, or turn the SHUTTLE( ) during playback or pause mode. The playback speed increases when the RIGHT(►►) button is pressed during playback and decreases the LEFT(◄◄) button is pressed.

Turning the SHUTTLE( ) to the right changes the playback speed in the order of 1/5, 1/2, 1x, 2x, 3x, 5x, 10x, and 20x speeds in the forward direction, and turning it to the left changes the playback speed in the order of 1/5, 1/2, 1x, 2x, 3x, 5x, 10x, and 20x speeds in the reverse direction. Release the SHUTTLE( ) to return to the previous mode again. Supported playback speeds are 1/5, 1/2, 1x, 2x, 3x, 5x, 10x, and 20x in forward and reverse directions.

Note

JOG( ) and SHUTTLE( ) are displayed on below figure.
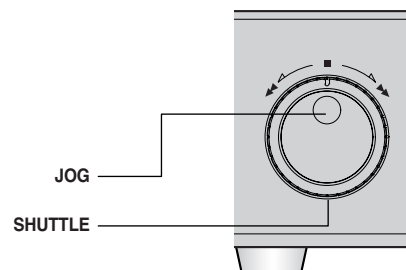
Temporay Stil Screen View

Press the SET/STILL(⏎/❙❙) button during playback.
(For details on the pause mode, refer to "6. Basic Playback" on p. 5-7.)

View by Field

In order to view still images one field at a time, press the RIGHT(►►) or LEFT(◄◄) button during the pause mode, or turn the JOG( ) during the playback or pause mode. Press the RIGHT(►►) button or turn the JOG ( ) to the right to view still images one field at a time in the forward direction, or press the LEFT(◄◄) button or turn the JOG( ) to the left to view them in the reverse direction.

To play back again, pres the SET/STILL(⏎/❙❙) or PLAY(►) button.

VI. Others

1 Product Standards

Rated Voltage	AC 110 ~ 240V, 50/60 Hz
Power Consumption	26W
HDD	80 GB Basic Installation (Simultaneous Installation of Max. 2 HDDs)
BACKUP	External SCSI II Interface(SCSI HDD)
Video Input	Composite Video, BNC Jack - 1CH (1.0 Vp-p, 75Ω)
Video Output	Composite Video, BNC Jack - 1CH (1.0 Vp-p, 75Ω
Audio Input	RCA Jack - 1 CH (-8 dBm, 600Ω)
Audio Output	RCA Jack - 1 CH (-6 dBm, 600Ω)
Video Compression Method	Motion JPEG
Audio Compression Method	G.723 (6.3 Kbps, 2.835 MB/h)
Video Resolution	720 x 240 [NTSC], 720 x 288 [PAL]
Picture Quality	Very High/High/Normal/Low
Recording Field Rate	60 ~ 0.50 Fields/sec [NTSC], 50 ~ 0.50 Fields/sec [PAL]
Alarm Record Time	10, 20, 30 sec, 1, 2, 3, 4, 5 min
Remote Control	RS232, RS485, LAN
Operation Temperature	0 °C ~ 40 °C
Storage Temperature	-20 °C ~ 60 °C
Operating Humidity	20% ~ 85% RH
Storage humidity	20% ~ 95% RH
Size	300(W) x 95(H) x 350(D) mm
Weight Approx.	5.7 Kg

2 Appearance Drawing
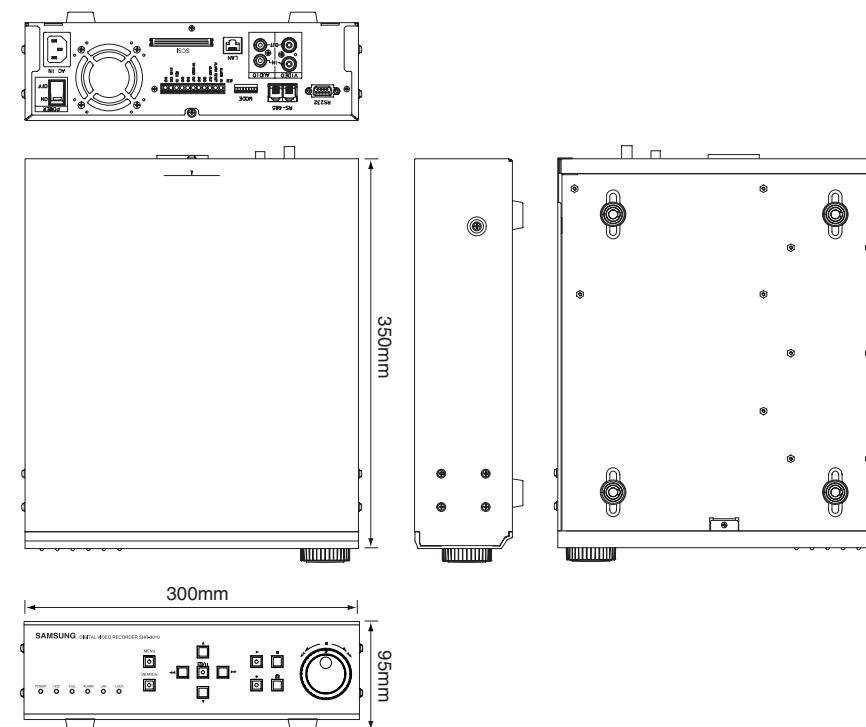
VII. Appendices

1 Check Points before Call Service Center

If the system malfunctions, please check the following instruction before you call the service center or the shop where you bought the system.

Trouble	Check Points
• Unable to supply power. • The POWER LED in front of the system remains off and the system is not running	– Check the power cable connection behind the system, power supply, and power switch.
• After power supply, the screen is all black. • After booting, the screen is all blue	– Check the power cable connection of the system and monitor and power supply. – Check the connection between camera output port and system image signal input port and between monitor image signal input port and system image signal output port. – Check the camera output. – Check the BNC Cable connected to the system.
• After power supply, no further progress available after booting menu screen	– Please call the service center or the shop where you bought the product for investigation or repair.
• No voice	– Check the connection between microphone voice output port and system voice signal input port and between monitor voice signal input port and system voice signal output port. – Check the voice signal output. – Check the connected cable.
• Unable to record. • The RECORD button (●) can't activate recording.	– Without input signal, the system can't perform recording. Please check if the camera output port is well connected. – As long as the free HDD space ratio remains 0% and the FULL indicating LED in front the of system remains on, the system will not start recording. – To start recording as it is like above, you should set the DISK END MODE in the RECORD MODE SETUP menu to CONTINUE and press the RECORD / button(●). – To start recording while the DISK END MODE is set to STOP, you should set the CLEAR ALL DATA in SYSTEM SETUP menu to ON and terminate the menu. Then, all the current data will be deleted. Now, you should press the RECORD button() to start recording. However, as the deleted data can not be recovered by all means, you should check again before deleting.

Trouble	Check Points
• Abnormal recording and playing after connected to the Multiplexer	– Check the connection between Multiplexer image output port and system image signal input port and between Multiplexer image signal input port and system image signal output port. – Check the connection between system trigger output port(Trigger Out) and Multiplexer. – For the details of the Multiplexer, please refer to the Multiplexer User's Manual.
• No voice during play	– If the AUDIO RECORD in the RECORD MODE SETUP menu is set to OFF, only images will be recorded. You should set it to ON to record both image and voice. – No voice will be supplied to the Still screen or Play mode at high or low speed.
• The screen trembles vertically during play.	– Screen trembling often occurs during recording or playing at high or low speed, which is a normal symptom.
• Interval between image and voice during play	– Absolutely normal according to the system standard
• Garbled screen during play	– This device can transmit both NTSC and PAL signals to the input image signal. – If the current system is initialized to the PAL signal though the recorded data in the past was the NTSC signal or vice versa, the screen will be garbled by recording the previous data whatever because both signals are different with each other. For the normal data retrieving, you should turn off the system, connect the signal of the same kind as recorded earlier to the input port, and reboot the system. Then, data retrieval will be performed in normal condition.

2
Q & A

Question	Answer
• Does recording continues after power cut during recording.	– Without power supply, the system can't perform recording. But if the system was recording before power cut, it will resume recording upon power supply.
• What would become of the system if disconnected with the input image signal during recording?	– Without connection with the input image signal, the system can't keep recording. But the system will resume recording upon the supply of normal input image signal.
• What shall I do to stop recording manually while the system is detecting movements or in recording mode as set by the alarm. • When system is in Reservation Recording state, how to stop the recording intentionally?	– Press the STOP button (■) for 3 seconds. Then, recording will be paused for 5 seconds and you shall enter the menu to change the recording setup in the meantime. If you want to stop the alarm recording, you shall set the ALARM ENABLE of the ALARM RECORD SETUP menu to OFF. If you want to stop the reserved recording, you shall set the TIMER of the ALARM RECORD SETUP menu to OFF. Without your action against the system for 5 seconds, the system will return to the previous mode.
• What am I supposed to do if I forget the system password or network ID and password?	– You should turn the power on and off while holding on to the STOP button(■). Then, the system setting value will be initialized as it had just before factory shipment.
• May I use an itentical IP Address for more than 2 systems?	– Yes, but as long as the 2 systems are not connected to LAN simultaneously. Connecting the system to LAN one by one is to be connected to the remote monitoring program by PC. If you want to connect the other system to LAN to be connected to the remote monitoring system by PC, you shall disconnect the system currently connected to LAN from the remote monitoring system by PC and connect the system to LAN. Then resume connection in at least one minute. Otherwise, you may not be connected.

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